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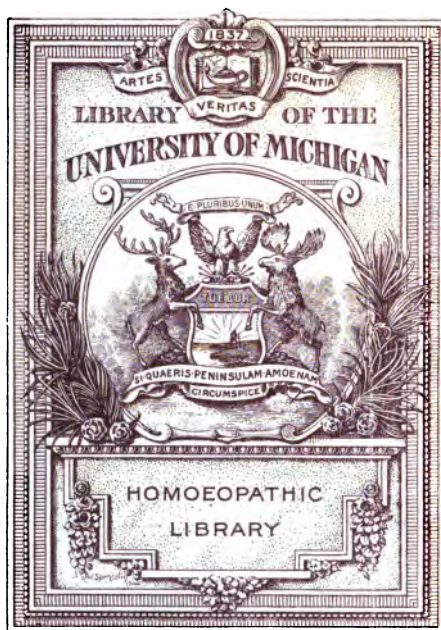
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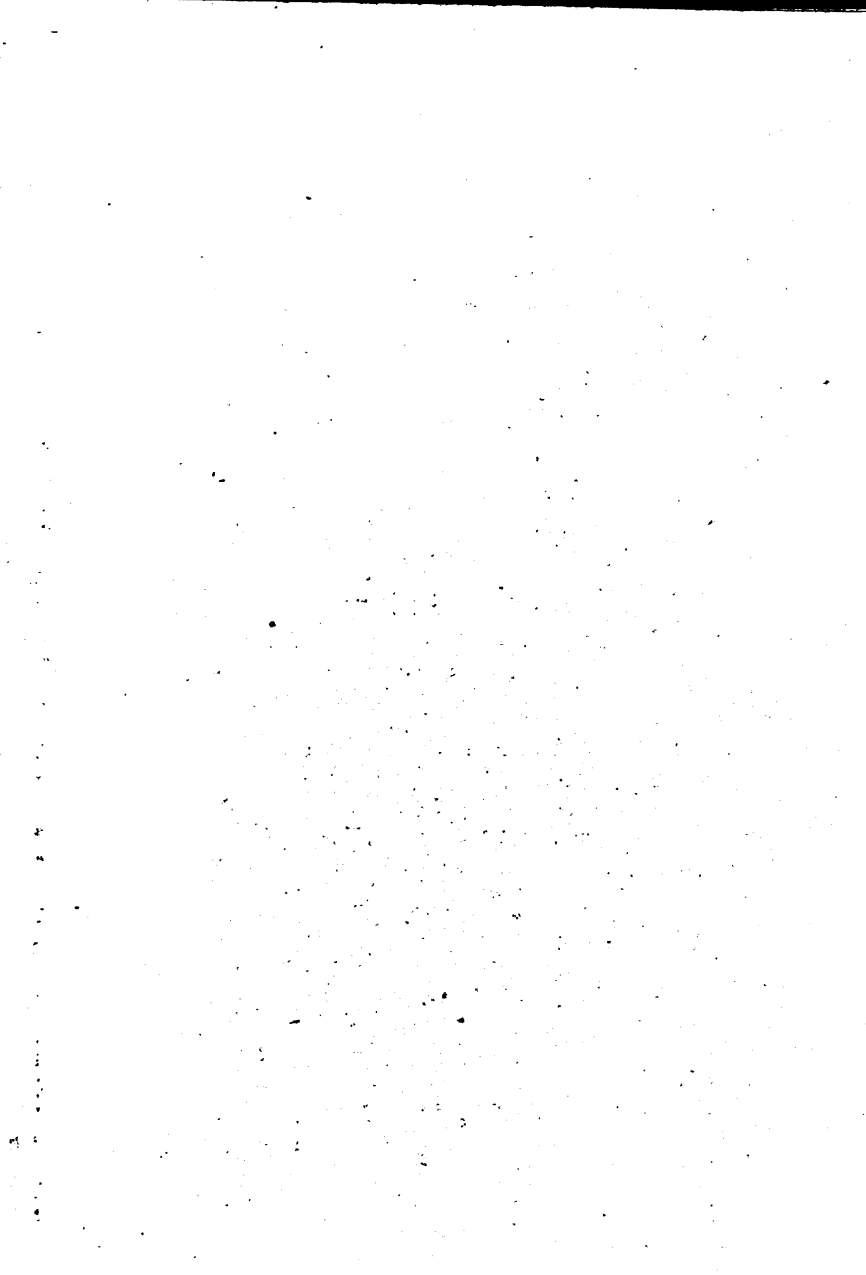
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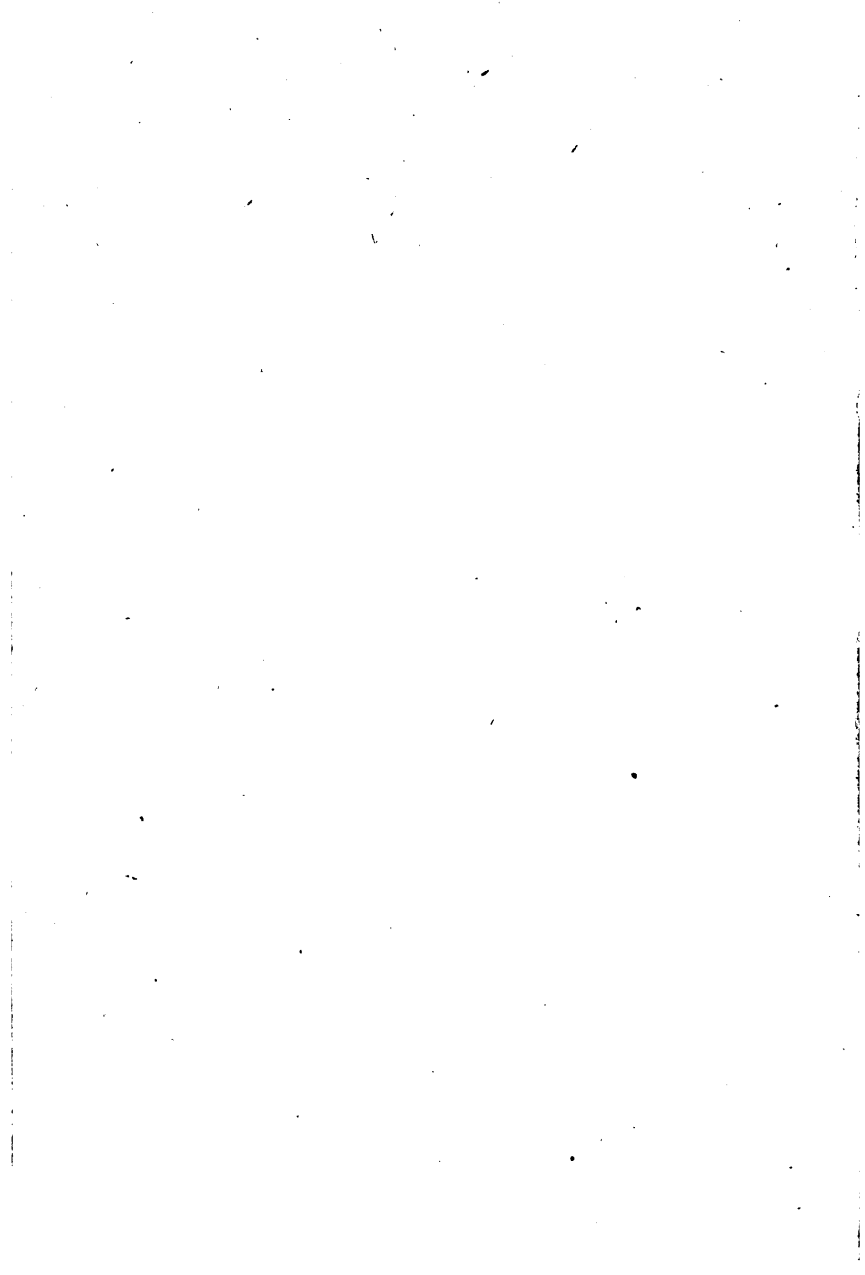
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A NURSERY MANUAL

The Care and Feeding of Children in Health and Disease

BY

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TO
THOMAS M. DILLINGHAM, M. D.
THIS BOOK IS AFFECTIONATELY
INSCRIBED

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PREFACE.

THIS book was originally written for the use of my own patients and nurses, among whom I have found a constant demand for such information as the book contains. It has been largely the outgrowth of lectures delivered in the Flower Hospital Training School for Nurses.

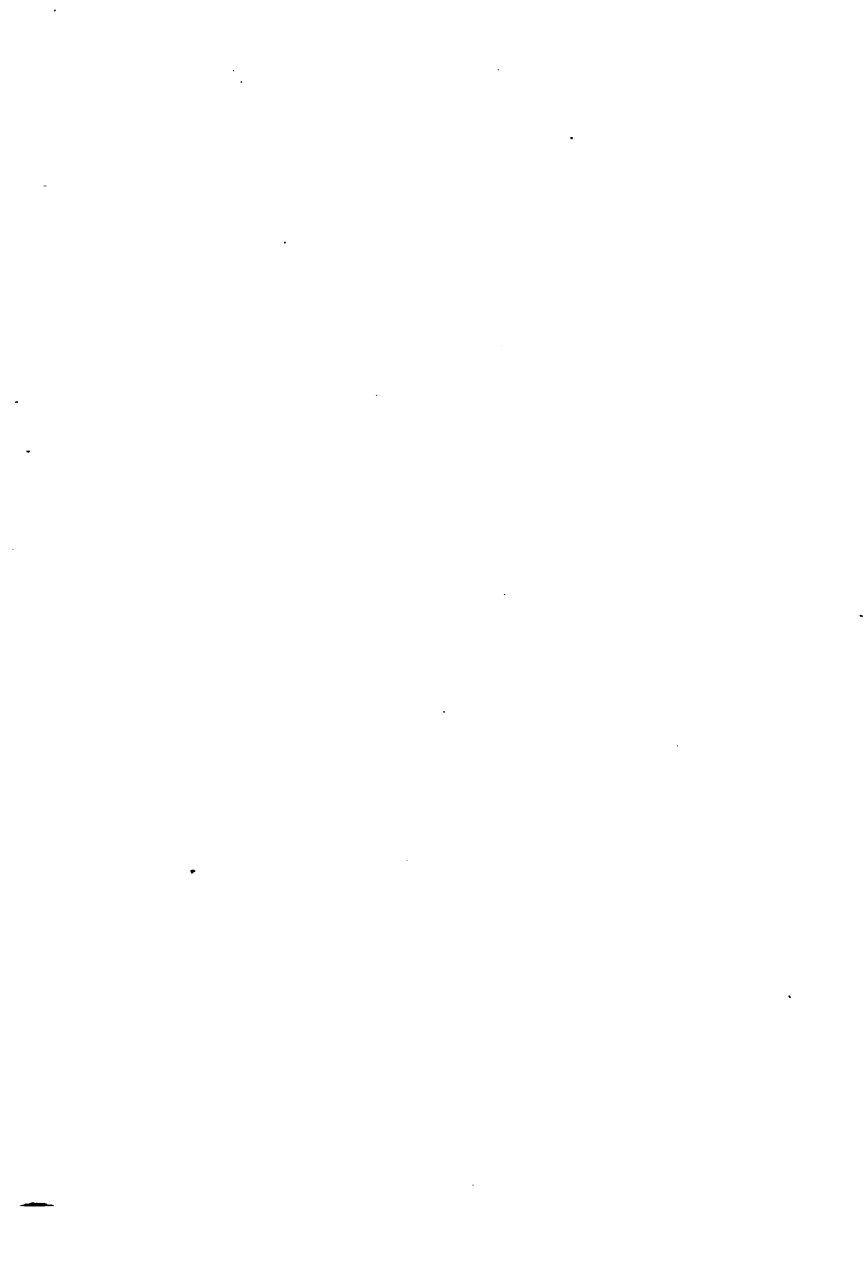
An effort has been made to write clearly and concisely, and to avoid the common error of giving too much technical information. This is especially true of the section on care during illness, as it is my belief that a human life is too valuable to be trusted in any but skilled hands. The therapeutic treatment is, therefore, purposely very meagre.

The book is intended for the use of homœopathic physicians and homœopathic families and all those who believe with me that a child who has been properly fed and reared under the homœopathic regime, is physically better equipped for life than any other.

REUEL A. BENSON, M. D.

8 West 49th St., New York.

April, 1908.



CONTENTS.

PART I.

The Care of Infants.

THE NURSERY.

Windows, Location, Furniture, Floor, Walls, Bed, Closets, Toys, Heating and Ventilation, Scales, ...	11
--	----

BATHING.

General Rules, Temperature, Method of Bath- ing, ...	17
---	----

CLOTHING.

Cord Dressing, Band, Napkin, Shirt, Petticoat, Dress, Fastenings, Short Clothes, Stockings, Shoes, Night Garment, Head Covering, Blankets, ...	21
---	----

CRYING.

Normal Cry, Cry of Pain, Hunger, Illness, Anger, ...	29
---	----

AIRINGS, ...	32
--------------------	----

SLEEP.

Amount Required, Sleeping Out of Doors, ...	35
---	----

NURSERY MAIDS.

Bedroom, Training, ...	36
------------------------------	----

MOUTH, EYES, EARS, NOSE, ...	37
------------------------------------	----

DENTITION, ...	42
----------------------	----

WEIGHT AND DEVELOPMENT.

Normal Weight at Different Ages, Fontanel, Mental Impressions, Voice, Sitting and Stand- ing, ...	45
---	----

PART II.

Feeding.

MATERNAL FEEDING, ...	53
CONTRA-INDICATIONS FOR MATERNAL FEEDING.	
Temperament, Milk Supply, Diseases, Pregnancy, ...	54
NURSING.	
Frequency of Nursing, Regularity in Feeding, Period of Nursing, Care of Breasts, Sore Nipples, ...	55
REGIMEN.	
Diet of Nursing Mother, Articles Which Should not be Taken, General Rules for Diet, Exer- cise, Drugs, ...	57
THE NURSING INFANT.	
The Well Nourished Infant, The Poorly Nour- ished Infant, Vomiting and Indigestion, ...	59
WEANING.	
Method of Weaning, Rapid Weaning, Hot Weather, Age for Weaning, ...	61
WET NURSE, ...	64
SUBSTITUTE FEEDING.	
Difference Between Mother's Milk and Cow's Milk, ...	64
MODIFIED MILK.	
Explanation of, Selection of Milk, Preparation of Modified Milk, Bottle and Nipple, Uten- sils Necessary, ...	65
MILK FORMULAS FOR THE FIRST YEAR, ...	74
MILK DILUENTS.	
Barley Water, Oatmeal Water, Whey, ...	77

CONTENTS.

7

LIME WATER, ...	78
PASTEURIZED MILK, ...	79
STERILIZED MILK, ...	80
PEPTONIZED MILK, ...	82
INFANT FOODS, ...	83
TRAVELLING.	
Preparation and Care of Food on Journeys, . .	84
GENERAL RULES FOR ARTIFICIAL FEEDING.	
Method of Changing Formulas, Indications for Changing Formulas, Method of Feeding, Tem- perature of Milk, Sleeping During Nursing, Stools, Diarrhoea and Constipation, ...	85
FEEDING FROM THE TWELFTH TO THE EIGHTEENTH MONTH, ...	89
FEEDING FROM EIGHTEENTH MONTH TO THE END OF FOURTH YEAR.	
Number of Meals, General Outline, Amount and Variety, Articles not Allowed, Sweets, ...	89
SPECIAL RECIPES.	
Beef Juice, Broth (Mutton, Chicken or Beef); Boiled Egg, Cracker Panada, Crust Coffee, Junket, Barley Jelly, Arrowroot, Indian Meal and Browned Flour Gruels, Double Baked Bread, Irish Moss Blanc Mange, ...	92

PART III.

The Care of Children in Illness.**GENERAL SIGNS OF DISEASES.**

ACUTE DISEASES: Vomiting, Temperature, Respiration, Pain, Sleep, ... 99

CHRONIC DISEASES: Nervousness, Loss of Weight, Cough, ... 103

HOMŒOPATHIC REMEDIES.

Aconite, Arsenicum, Belladonna, Bryonia, Calcarea carb., Chamomilla, Cuprum, Ipecacuanha, Nux vomica, Spongia, Calendula, Arnica, ... 104

HOMŒOPATHIC NURSING DURING ILLNESS, ... 107

DISEASES OF THE ALIMENTARY CANAL.

Sore Mouth, Sore Throat, Dentition, Acute Indigestion, Diarrhoea and Constipation, Worms, . 112

CONTAGIOUS DISEASES.

Isolation, Care and Disinfection, Board of Health Rules, Diphtheria, Scarlet Fever, Measles, German Measles, Chicken Pox, Whooping Cough, Mumps, ... 127

GENERAL DISEASES.

Colds, Bronchitis, Pneumonia, Croup, Tuberculosis, Rickets, Scurvy, Rheumatism, Convulsions, ... 150

BAD HABITS, ... 165

ACCIDENTS, POISON AND ANTIDOTES, ... 168

PART I.

The Care of Infants.



PART I.

The Care of Infants.

THE NURSERY.

From the standpoint of the baby, the nursery is the most important room in the house. Here he spends the greater part of his time, and here he receives his first impressions of the external world. His comfort and his health depend largely upon his surroundings. It is therefore necessary to make the nursery attractive and sanitary.

Windows: In selecting a room, it is first of all necessary that it should have plenty of windows and a southern exposure. Light and air are the first essentials of life, and there must be plenty of both in the nursery. The windows should be high enough from the floor to prevent draughts of air from striking small children who are beginning to walk, or if this

is not possible, the cracks at the sides and bottoms of the windows should be covered with felt. The windows should be provided with two sets of shades, one of which is of dark material so as to exclude the light when necessary.

Draperies: No heavy draperies should be allowed in the room. Light, washable, sash curtains are permissible, but not necessary.

Location: In selecting a room for a nursery, bear in mind that it will probably be used as a sick room for cases of contagious diseases. For this reason it should be as far removed as possible from the rest of the house, preferably on the top floor, and it is a great convenience if there is an intermediate room between the nursery and the hall, and an adjoining sleeping room for the mother or nurse. If there is a bath room connected, so much the better.

Furniture: In selecting the furnishings for the room, it should be remembered that all the articles may have to be fumigated or possibly destroyed, and for this reason, simple, inexpensive articles should be chosen.

Floor: The floor of the nursery should be of unpolished wood. The bottoms of doors

should be protected with felt to prevent draughts, and small rugs (on account of ease in cleansing) are much better than carpets.

Walls: Painted walls are better than paper, but in case it is necessary to use paper, avoid that which is brightly colored, especially green and yellow. Young children are susceptible to inhalation poisoning, and many a case of anæmia and nasal catarrh has apparently been due to chemicals in the wall paper. Most wall papers have the additional disadvantage that they cannot be washed.

Pictures: In selecting pictures for the nursery, avoid those with heavy, elaborate mouldings. Simple, unframed prints are perhaps best of all, as they are inexpensive and can be changed often enough to make a pleasant variety.

Bed: The bed and mattress are the most important articles of furniture in the room. The bed should be of iron, painted so that it can be carefully cleansed by wiping, and its sides should be high enough to prevent the child from climbing over them. Most nursery beds are too low. The bed should stand well up from the floor, not only for the convenience

of the nurse, but to avoid the draughts of air which exist near the floor. It should be so placed in the room that the light does not fall directly upon the child's face. The mattress should be of felt, so constructed that the cover can be removed and the mattress thoroughly cleaned and aired. The mattress should be covered with a rubber sheet, the softer and lighter the better. A pillow is unnecessary, and children are generally more comfortable without one. A child's neck is short, and because of this the head should not be raised. Light weight, all wool blankets are the best covers. No spread except a sheet should be used. Blanket pins with elastic attached may be used for keeping the bed-clothes in place.

Closets and Drawers: The child should have its own closets and drawers, the clothing of the nurse being kept in a separate room. The most convenient nursery chest of drawers is that kind which consists of a number of strong, covered, pasteboard boxes, arranged one above the other in a rack. Each one can be taken out and carried to the part of the room where it is needed, and all can be easily removed and cleaned.

Toys: In selecting toys for the nursery, it should be remembered that the child puts everything into its mouth. Therefore avoid painted things, and toys of woolen and flannel which cannot be easily cleansed; also those with sharp corners or parts which may be broken off and swallowed. Rubber toys with metal whistles are unsuitable because of the danger of swallowing the metal part. The test for all toys is whether they can be boiled or not. Any toy which can be boiled without injury is fairly safe for the child to play with.

Heating and Ventilation: The heating and ventilation of the nursery are of great importance. The air in the room should be pure, fresh and warm. The temperature should be between 68° and 70°. The best heating arrangement is an open wood fireplace, both on account of the quality of the heat and the ventilation. The fireplace should be protected by a screen, which should be so securely fastened in place that it cannot be pulled down. In steam heated rooms, the radiators should be located under the windows. A board two or three inches wide

placed under the window will allow sufficient air to enter between the upper and lower sashes. The advantage of this method of ventilation is that it avoids direct currents of air. In case more air is required, the window can be opened at the top.

While it is true that children require an abundance of fresh air, it is also true that they are much more susceptible to cold and changes of temperature than adults. Never allow the room to become overheated, and never cool it off too quickly. Always remember that the temperature of the room near the floor is lower than that higher up in the room, and the child must be protected from the currents of air which exist in these lower levels.

In dusting and sweeping the nursery, great care should be used to avoid dust in the air. Damp cloths should be used on the walls and furniture, and bits of damp blotting paper spread on the floor before sweeping.

Scales: Every nursery should be provided with properly adjusted scales for weighing the baby. These should be capable of weighing as low as half ounces. The so-called

kitchen scales with dials are not satisfactory nor are those from which the baby is suspended in a blanket. Fairbank's "Express Package" scales provided with a basket or a large scoop are perhaps the best.

BATHING.

As soon as the baby is born, the skin should be anointed with pure warm olive oil. After twelve hours a sponge bath with warm water may be given, which may be continued daily for two weeks, after which the baby may be bathed in a tub daily unless such baths are contra-indicated. If, after bathing, the skin or nails turn blue, or if the baby shows indications of weakness or lowered vitality, a tub bath should not be given. Premature babies, or those which are very weak and puny at birth, should not receive tub baths, and frequently all bathing must be omitted until the baby is stronger. Bathing is a luxury, not a necessity, and the bath must be adapted to the individual baby. Only general rules can be laid down.

A bath thermometer should be used if pos-

sible. When a thermometer is not available, the nurse should test the temperature, not by the hand, but by touching the elbow to the water. Water which seems right to the hand is oftentimes too hot or too cold for the baby. The following table may be taken as a general guide for the temperature of the bath at different ages.

At birth	-	-	-	-	98° Fahrenheit
First four weeks	-	-	-	-	95° "
1st to 6th month	-	-	-	-	93° "
6th to 12th month	-	-	-	-	90° "
12th to 24th month	-	-	-	-	86° "

After this the temperature may be gradually reduced in the summer to 80°, and by the time the child is three or four years old, if well borne, baths at 75° may be given. Never try to toughen the child by giving cold baths.

The bath should be given as quickly as possible, the tub being placed at the side of the fireplace farthest from the windows. Warm towels should be ready at hand, and a warm, soft blanket in which to wrap the child. The clothes should be so placed that they will be warm and ready to put on.

In giving the bath, the face should be washed first, keeping the body and limbs wrapped in a warm blanket. The eyes, nose and external ears may be cleansed with clear water and a bit of cotton. Great care should be used not to rub the eyelids or the mucous membrane of the nose, and water must not be allowed to get into the ear. These parts are very sensitive, and unless great care is used, more harm than good will be done in the efforts to cleanse them.

Ordinarily, soap is unnecessary, except perhaps for the hands and feet and the region around the anus. These parts should be washed with soft cloths while the infant lies on the nurse's lap. The baby should then be placed in the tub, and the body carefully rinsed. Soft cloths should be used instead of sponges, which are always filthy. The baby is then quickly removed from the tub, wrapped in a warm blanket, carefully dried without too much rubbing, and dressed.

The tub is preferably of white rubber, hung on a simple frame of convenient height.

The wash basin should be of china, and is more convenient if divided into two compartments so that clean water is always available.

There should be two wash cloths, one for the head and face, the other for the body and extremities.

Pure castile soap only should be used on healthy skin.

Powder may be used after the bath in the folds of the skin, if there is any irritation or redness. Pure unscented talcum powder is the best, and a moderate quantity applied to the skin is better than too much. If the skin is perfectly clear and soft after the bath, powder should be omitted. It is rarely necessary for healthy infants if the skin is thoroughly dried. When used it only clogs the pores of the skin. Powder should be applied with a bit of clean cotton which can be burned after using. Skin diseases may be easily carried from one part to another by means of a "powder puff." If powder is shaken on the skin from a box there is danger of using too much.

Babies with skin eruptions should not be bathed with soap and water unless under a physician's directions. Eczema and many other skin conditions are aggravated and sometimes caused by too much bathing.

In cases where there is excessive irritation in the folds of the skin which is not relieved by powder, the soap should be omitted and a small bag of bran placed in the tub. No local applications should be used on the skin except when directed.

CLOTHING.

It is of great importance that those who care for infants should realize the necessity of proper clothing. The surface of an infant's body is greater in proportion to its entire weight than that of adults. Greater surface means that there is greater radiation of heat, and that the infant will cool off much more rapidly than those with larger bodies. We thus see at once that special attention must be given to retaining the heat of the body. It is for this reason that a small, weak infant must be kept warmer than a large, healthy one. At the same time we must not err in the opposite direction and clothe the child so warmly that excessive perspiration results, and consequent rapid cooling at the slightest change. It must also be remembered that

even the slightest pressure on the infant's body may interfere with the growth of the internal organs. Clothing, therefore, must be light, loose and warm.

Cord dressing: One of the first attentions bestowed upon the new born babe is the proper dressing of the umbilical cord (navel). This should be attended to by the physician or nurse, and when once applied should never be disturbed or changed except by skilled hands. This dressing may be held in place by a few turns of a gauze bandage around the infant's abdomen. Outside of this the abdominal band may be applied.

Abdominal band: The best form is that which is made of light weight silk and wool material. It is provided with shoulder straps and a tab in front, which is fastened with a safety pin to the napkin. Great care must be used to prevent undue pressure, and it is better to have the binder too loose than too tight. A binder which is loose before feeding becomes sometimes painfully tight afterward, and it is not uncommon to find that the supposed colic of infants is due to a too tight binder. The heavy flannel binders which

have been used in the past, and which are supposed to prevent rupture, are of no value and invariably cause discomfort to the infant. A broad gauze bandage (mentioned above for holding the cord dressing in place) will answer all the purposes of the old-fashioned flannel binder, and is more cleanly, comfortable and economical. If a flannel binder is used it should be of the lightest material. It should pass around the abdomen only once, and be fastened at the side with tapes rather than with pins. Pins are always to be avoided in an infant's clothing when possible. Not only are the points likely to cause pain, but also the pressure of a safety pin upon the body may be uncomfortable to the infant.

Napkin: The napkin may be folded and fastened with a safety pin as is customary for keeping it in place. The usual napkin is heavy and cumbersome. It can be replaced by several layers of soft gauze or cheese cloth which absorb the urine from the skin, an important quality in cases where the skin is easily irritated. This gauze is procured in large rolls, and, as it is inexpensive, the pieces which become soiled from a movement of the

bowels can be burned. If the old-fashioned napkin is used, it is advisable to place a small square of this gauze inside the napkin. If economy is desired these pieces may be used again after thorough washing and boiling.

In fastening the napkin, great care must be used not to have it too tight. A much better method of fastening it is that in which a large square of the gauze is laid under the child's buttocks and the two upper corners pinned in front to the binder, while the two lower corners are carried around the child's thighs and pinned to the back of the napkin. This is quite as efficacious in young infants as the common method, and is much more cleanly and comfortable. All napkins must be washed, boiled, and thoroughly dried before re-applying. It must be remembered that soiled napkins may contain disease germs and these may be conveyed on the nurse's hands and infect others. This is especially likely to happen in cases of summer diarrhoea. The nurse should therefore use great care in cleansing her hands after changing the napkins.

After the band and napkin are adjusted there are three garments to be considered,

the shirt, the petticoat and the dress. These complete the long clothing. No stockings are necessary, but short, knit socks may be used if desired.

Shirt: The shirt should be cut with long sleeves and a high neck, and should be nearly as long as the outer dress. It should be of fine, soft, all wool, or silk and wool material. A fresh garment of this sort is sufficient for night wear.

Petticoat: The petticoat is made of fine flannel with no sleeves and low neck. It should be large enough to fit loosely over the shirt, and also nearly as long as the outer garment. Both of these garments should be sufficiently large to allow the infant to move its legs freely without restraint. If additional warmth is required, the petticoat may be constructed with a flap at the bottom which folds up in front and buttons, closing the petticoat like a bag. This is not necessary, however, with a healthy baby and a well warmed nursery.

Dress: The outer slip or dress can be made of light fine material, such as nainsook or lawn. The mother's decorative tastes may

be given full play with this garment, but it is wise to avoid folds and ruffles, which are likely to form in bunches under the baby's body when lying. The dress should have a high neck and long sleeves and should be at least a yard in length. It should never be starched.

Fastenings: All of these garments should be open from top to bottom, and should be fastened with small, flat buttons, either in front or behind. All the garments should correspond in this respect, so that all three may be slipped on together, and the baby turned only once during the dressing. Mothers who consider the baby's comfort as of more importance than its appearance will have these garments fastened in front. A row of buttons pressing against the baby's back will not add to its comfort. After the bath these three garments should be put together and put on quickly with a single turning, thus avoiding the discomfort usually caused by excessive handling in dressing the infant.

Short Clothes: About the time the child begins to creep, or by the fifth or sixth month,

if the weather is warm, short clothes may be substituted for the long ones.

Shirt: The undergarment can be replaced by a light, knitted, or fine, all wool, short undershirt, with high neck and long sleeves.

Petticoat and Dress: The outer garments may be shortened, and in winter, if necessary, another short petticoat may be worn.

Stockings: Long stockings of soft wool must be added, to be held in place by pinning to the napkin. The practice of toughening children by letting them go bare-legged is most pernicious. It may do no harm in strong, sturdy children, but certainly does no good. Stockings may, of course, be omitted in warm weather.

Shoes: Soft moccasins without heels or stiff soles are best. Most so-called "Orthopædic shoes" are bad.

Night Garment: The same night garment may be worn until the child is so active that the legs become uncovered during the night, in which case a long gown with a folding flap or a gathering string at the bottom may be used, or in older children night drawers.

Head Covering: No head covering should

be used in the house. When the baby is taken to the open window for air, the head may be protected by the blanket in which the infant is wrapped. A bonnet of silk or other soft material may be worn when out of doors, and in winter it may be of two or more thicknesses, or a knitted hood may be worn if very cold. Bonnets constructed with a gathering string at the back are bad on account of the unnecessary pressure at the back of the head. The bonnet should be perfectly smooth and fit loosely.

In providing the baby's wardrobe it is wise to be liberal as to the number of garments. Fresh garments should be put on daily.

Blankets: Especially should there be a large number of fine, soft, flannel or knitted wrapping blankets. These should be large enough to fold around the baby two or three times.

It should always be remembered that no hard and fast rules for dressing a baby can be laid down. Every baby is a law unto itself, and some must be clothed more warmly than others. This difference in individuality is as marked in babies as in adults, and should

always be considered, not only as regards clothing, but in all the baby's surroundings. The most frequent mistake, however, is that of overdressing the baby while in the house, and this is often done when the garments are of too heavy weight. It is best to buy soft silk and wool garments of the lightest weight, and when extra warmth is desired, use two light shirts instead of a single heavy one.

CRYING.

As soon as a healthy baby is born it cries. This not only opens the lung cells and gives them exercise, but the exertion also sends the blood coursing briskly through the blood vessels and the skin becomes flushed. It is the baby's principal means of exercise and is a valuable aid to development. Crying is a normal function and need cause no alarm. It is, moreover, almost the only method the baby has of expressing its feelings, and every mother should know the significance of the different cries of her baby.

Normal Cry: The natural, normal cry is loud and strong, almost a scream. The in-

fant gets red in the face with it. Half an hour a day of such crying is not too much for normal exercise, and if it is accompanied by vigorous twisting and kicking, so much the better. When the cry is too long or too frequent, it is then abnormal and we should seek the cause and remove it if possible. It is wise to look for the cause when the baby begins to cry. Remember that the baby may be thirsty, hungry, wet or uncomfortable. Take up the baby, and if the crying ceases and is resumed when the baby is laid down, it is safe to leave it alone until it is "cried out."

Cry of Pain: The cry of pain is strong and sharp, and usually not continuous, increasing when the pain comes on and stopping during the intervals. It is usually accompanied by drawing up of the legs or other movements indicating the location of the pain. Earache is a frequent unrecognized cause of pain. It may be detected by seeking carefully for tenderness around the ears.

Cry of Hunger: The cry of hunger is a fretful, whining cry, usually continuous, and the infant reaches out with its hands in an effort to obtain nourishment, or sucks its fist.

Cry of Illness: The cry of illness is more in the nature of moaning and fretfulness than real crying. The infant is likely to be restless and uneasy.

Cry of Fright: A nervous baby often cries out from fright, especially on waking up suddenly or in a dark room alone, and for the same reason on the approach of a stranger.

Cry of Anger or Desire for Attention: Two other causes for crying are anger and the desire for attention. The latter is easily recognized, because crying ceases when the infant gets what it wants. Babies, even when young, are creatures of habit, and they quickly learn the difference between indulgent parents and those who are firm. The desire for attention, however, is evidence of the individuality and human qualities possessed by a baby, and intelligent mothers will not be likely to heed those who tell them not to pet and fondle a baby which desires attention. Human companionship is a natural desire, and the baby should certainly be indulged within reasonable limits.

When all other causes are eliminated and we are certain that the baby is crying from

anger, it is best to let him alone, and after once having "cried it out," the infant will have learned its first lesson in self control. Little harm can come to the infant from crying. The danger of rupture is so slight that it may be ignored. It is doubtful if crying ever produced a rupture in a normal infant. It is, however, far better to humor the whims of an infant many times than to allow it to cry from pain or other removable causes, and when there is the slightest doubt existing, the benefit should be given to the infant. Many times the cry of pain is mistaken for that of anger, and a suffering infant is blamed for a bad disposition. Do not worry if the baby cries, but study and observe the character of the cry, and, if possible, find the cause.

AIRINGS.

The question as to when the baby may be taken out of doors and how long it may remain there depends entirely upon the strength of the baby and the climate. Except when the weather is very cold, the infant may be taken out of doors, well wrapped up, and re-

main there from ten to thirty minutes daily during the first two weeks of its life. After that it may have longer daily airings, and in summer, unless the weather is very stormy, it may remain out of doors as much as possible. There is no objection to an infant's sleeping in the open air, if well protected, but on no account should the airing interfere with the regular times for feeding.

Premature or puny babies must be treated quite differently, and sometimes it is necessary to keep such babies in a warm room until they have become stronger. Intelligent judgment must be used in the matter of airing, and while fresh air is necessary and desirable, it must be remembered that the infant should be gradually accustomed to it.

Outer Garments: The outer garments should be regulated according to the temperature. On a warm day, even though that day is in the middle of winter, the baby will not need as many outer garments as it does on a cold day. It is not unusual to find a baby wrapped up in the same manner every day in winter, and these garments are shed when the summer approaches. More intelligent treat-

ment is to change the outer wraps from day to day according to wind and weather. In order to do this, it is necessary to have a number of outer garments of different weights. It is a mistake to provide a few expensive or fashionable garments when a number of cheaper ones will add to the baby's comfort and health.

Babies are very susceptible to wind, and such days will cause them more harm and discomfort than clear cold days. Under no circumstances should the wind be allowed to blow directly upon the baby's face. Days when there is melting snow upon the ground should also be avoided. The window thermometer should always be consulted before dressing the baby for its airing.

The baby's carriage should be deep and roomy. The top should be provided with an extra piece behind, so that when the top is brought forward to protect the baby's face the rear is closed. Such a carriage is that known as the Pullman Sleeper. Go-carts, especially the folding form, are uncomfortable and put too much strain on the baby's spine.

SLEEP.

Infants differ as much as adults in the amount of sleep required, and the only safe rule is to allow each child to sleep as much as possible.

After nursing, babies naturally fall into a normal sleep. They should always be awakened when the hour for nursing returns.

As the child grows older, less sleep is required, but it is well to have a regular period for resting in the forenoon and in the afternoon. Later the forenoon rest may be omitted. It is not necessary for the nurse to rock the child asleep in her arms. From the beginning, the infant should be taught to sleep in its own bed and in a room by itself. If this is done from the first, the child is much happier and the nurse is saved a great deal of trouble.

There is no objection to sleeping out of doors either day or night, if the weather is mild and the child is kept warm. Great care must be taken, however, to prevent mosquito and other insect bites. Diseases are often conveyed in this way as well as by house flies.

A few cents invested in mosquito netting will often save a large amount in physician's fees.

NURSERY MAIDS.

The first and most important considerations in selecting a nursery maid are her health and personal habits. Many mothers entirely forget to consider these points in choosing a maid, and yet it is probable that more infants acquire tuberculosis, for instance, from nursery maids than from hereditary causes. The nursery maid should be young; those from twenty to thirty years are more satisfactory than those who are older and have had more experience. She must be honest, conscientious, and willing to adapt herself to the wishes of the mother in caring for the baby. Older women are apt to have too many bad notions, and are usually too fixed in their ways. The nursery maid should report every detail to the mother with as much care and intelligence as the trained nurse exercises in reporting to a physician. No detail of the nursery is too slight to be overlooked. Many infants have acquired bad habits from nursery maids which

have lasted them all through their lives, and, in the majority of cases, without the knowledge of the parents.

Nursery Maid's Bedroom: The nurse should not be allowed to sleep near the baby. If possible she should have an adjoining room. The impure air from an adult's lungs is not good for the baby to breathe.

Training: The nurse should understand babies thoroughly, and for this reason those who have had training in a babies' hospital are apt to be more successful. The chief attributes of a good infant's nurse are a fondness for children, willingness to obey implicitly the directions given, and an even temperament, which can adapt itself to the delicate nature of the infant's mind.

MOUTH.

The mouth is an organ which is usually over-cared for during the early months of life. The nurse feels that it is necessary to rub the tongue and gums with the finger in order to cleanse them, when, as a matter of fact, such treatment is responsible in many instances

for sore mouths. The best way to care for an infant's mouth is to let it alone always. The mouth as well as the other openings of the body are self-cleansing. Nature cares for them if she is not interfered with by meddling nurses.

Drugs are rapidly absorbed into the system through the mucous membrane of the mouth, and serious harm may result from mouth washes. Absolute cleanliness of everything which goes into the baby's mouth is the surest preventive of disease. The so-called baby pacifier, a rubber nipple with a ring, should never be allowed on this account. It is one of the most frequent carriers of disease, and many cases of indigestion and tuberculosis can be traced directly to its use. It is also responsible for many unsightly deformities of the upper jaw and teeth.

Kissing. The baby should not be kissed on the mouth, and the nurse especially should be warned against so doing. It is easy to infect an infant with tuberculosis in this way. Kissing upon other parts of the face by those who are healthy will do no harm, but it is a practice which need not be encouraged.

Older Children: Older children may be taught to rinse the mouth and throat with warm water. They should first thoroughly rinse the mouth, then throwing the head back, as if for gargling, allow a mouthful of the solution to pass down into the throat, thoroughly bathing the tonsils and pharynx. After rinsing for a few seconds, the solution should be spit out or swallowed. This procedure should take the place of gargling under all circumstances, as an inflamed throat is often aggravated by the movement caused in active gargling. Children should also be taught to open the mouth and allow the mother to examine the throat. The handle of a spoon makes the best tongue depressor, and as soon as the child learns that it is not to be hurt, it is easy to examine the tonsils and pharynx.

EYES.

The eyes require very little attention if they are healthy. They may be cleansed with a bit of soft linen and lukewarm water. The lids should never be rubbed, but simply wet with this swab and dried with a clean cloth,

with the gentlest touch. In case of any discharge from the eyes, they may be cleansed every hour by allowing a few drops of *Boric acid* (10 grains to the ounce) to pass into the eye under the lower lid. If the lids stick together, a little white vaseline may be smeared on them before sleeping. If this treatment does not give relief in a few hours, the condition is likely to become serious and should receive immediate attention from a physician. In no condition is early treatment so important as in inflammation of the eyes of infants. Often a few hours' delay in calling a physician and establishing treatment may result in blindness. In infants under a year, it is not wise to allow a bright light to strike directly on the eyes.

EARS.

Aside from keeping the external ear free from wax, a healthy ear may be left alone. Never use a tooth pick or any other pointed object for cleaning the ear. The ear drum is very delicate and the slightest injury to it may cause serious harm. Children frequently

suffer from earache, and in many cases, although the pain is in the ear, it is caused by an irritation upon the nerves of the ear from a tooth which is forcing its way through the gums. Treatment directed to the teeth will often relieve this pain, and the ear should receive no treatment from the mother except the application of heat. The ear should first be covered with cotton, and a hot salt bag or hot water bag placed under the affected part. A hot salt bag is perhaps the most satisfactory.

Drugs which are dropped into the ear are of doubtful value, and usually do harm.

NOSE.

The nose may be kept clean by using a bit of cotton twisted on the end of a toothpick. This may be dipped in warm water, or, if there is inflammation of the nose, a little vaseline may be used. The greatest gentleness should be used in cleansing the nose, and the end of the swab should never be passed so far inside the nose that it is out of sight. Harsh treatment is worse than none.

Douches and nasal sprays should be avoided except under a physician's direction. The mucous membrane of the baby's nose is so sensitive that an inflammatory condition may easily be caused by spraying. In addition to this, if too much force is used, fluids may be driven into the tube between the ear and the nose, and cause pain and discomfort and sometimes permanent injury.

DENTITION.

There are no fixed rules governing the appearance of the teeth. Individual infants vary, and it is not unusual to find that the appearance of the first teeth is sometimes postponed to the end of the first year. Ordinarily, however, we may expect to find the two lower, middle, front incisors appearing about the sixth or eighth month; not uncommonly one of them will appear as early as the fourth month. From the eighth to the tenth month we may expect the four upper, front incisors to appear, and by the twelfth or fourteenth month the two lateral, lower incisors and the four first molars are likely to have arrived.

The four canines and the four second molars follow from the eighteenth to the thirty-second month, and these complete the twenty temporary teeth.

The second set of teeth begins to replace the first at about the sixth year. The first four teeth of the second set, usually called the six year molars, do not replace any of the first teeth but appear in the space back of the temporary teeth.

The growth of the teeth is more or less dependent upon the nourishment the infant is receiving, and although delayed dentition is not a serious condition, it is usually wise to make some change in the dietary. Sometimes the addition of a small amount of beef juice will supply the elements needed, and in artificially fed infants it is frequently necessary to change the proportions of the milk formula to meet the required needs. It is oftentimes surprising to see how these dietetic changes will hasten the eruption of the teeth.

Too much stress cannot be laid upon the importance of the proper examination of the infant by a physician during this period. In many cases serious diseases obtain a foothold

upon the weakened constitution of the teething infant, or are masked by symptoms which are attributed to teething. Infants in whom the first teeth appear during the hot weather are especially susceptible to serious intestinal troubles, and at this time the amount of nourishment must be reduced or gradually adjusted to prevent such complications.

Teething rings are useless and should be avoided, and the sensitive gums should never be touched, much less rubbed.

In older children it is of the utmost importance to have the first teeth cared for by a skilful dentist. It is not an easy matter to fill the cavities in the teeth of a child five or six years old and many dentists dislike this work, but it should never be neglected. The presence of decayed teeth in the mouth is a continuous source of infection, and the lymphatic system carries disease germs from these teeth to the glands of the neck and other parts of the body. It is a constant drain on the vitality of the child to overcome this poison, and a child so afflicted is seriously handicapped at a critical time of its life.

Children should be taught to brush the

teeth thoroughly with a very soft brush and warm water after each meal.

WEIGHT AND DEVELOPMENT.

The careful weighing of an infant gives us the most reliable information in regard to its development. Infants lose and gain weight very easily and are affected by very slight physical disturbances. The weight of boys is, as a rule, more than that of girls at birth.

The normal average weight of an infant at birth has been estimated as 7 pounds 2 ounces in the male, and 7 pounds in the female. It must be remembered, however, that healthy infants can weigh more or less than this. It is not unusual to find the birth weight varying from 5 to even 10 or 11 pounds. It should also be remembered that the gain in weight of infants is usually proportionate to their weight at birth. That is, an infant weighing 5 pounds at birth will gain less per week than an infant weighing 7 or 8 pounds. It is of no special significance, however, except as an indication of the individuality of infants.

Many mothers seem to feel that their babies must weigh a certain amount and gain a certain amount in order to be normal. This is no more true of infants than adults. The important point is that the baby does gain regularly. As to the number of ounces it gains, so long as it is gradually increasing in weight, there is no hard and fast rule.

Loss of Weight After Birth: During the first week of life there is usually a loss of from 4 to 8 ounces. The original birth weight may not be regained normally until the end of the second week. If, however, this weight is not regained at the end of the third week, it is a sign that the nutrition of the infant is at fault and measures should be taken to remedy it.

In the first three months of life the gain in weight is most rapid of all.

In the second three months it is less marked.

In the third three months, owing probably to the fact that this is the period of most active dentition, the increase in weight reaches its lowest point, and sometimes the baby does not gain at all.

In the fourth three months it progresses more rapidly.

The following table indicates approximately the gain in weight for these periods :

	TOTAL GAIN IN POUNDS	WEEKLY GAIN IN OUNCES.
First three months	5	6
Second three months	4	5
Third three months	2½	3
Fourth three months	2¾	3

The following table represents roughly the average weight of a boy from birth to 14 years :

Birth, ...	7 pounds
Five months, ...	14 pounds
One year, ...	20 pounds
Two years, ...	30 pounds
Three years, ...	34 pounds
Four years, ...	37 pounds
Five years, ...	41 pounds
Six years, ...	45 pounds
Seven years, ...	48 pounds
Eight years, ...	53 pounds
Nine years, ...	59 pounds
Ten years, ...	65 pounds
Eleven years, ...	70 pounds
Twelve years, ...	76 pounds
Thirteen years, ...	84 pounds
Fourteen years, ...	94 pounds

In girls the corresponding weights are slightly less up to the age of thirteen years, but as girls develop more rapidly during the thirteenth and fourteenth years than boys, the corresponding weight is more during these years.

It is useful to remember that the original birth weight is doubled at five months and trebled at fifteen.

Concerning the whole question of gain in weight, there is too much of a tendency among mothers to lay stress upon such approximate tables as are given above. These are not exact, and are only useful as general guides. They must be interpreted broadly, and not relied upon absolutely.

No alarm need be felt if there is variation in gain from day to day, or if some days there is no gain at all. The gain from week to week should be considered in normal babies, and it is not necessary to weigh a healthy baby oftener than once a week. The fact that the baby is gradually gaining and not losing is the important point, and we must bear in mind that no two babies are alike in regard to their weight.

It is also true that babies sometimes gain too rapidly. The fat baby is not necessarily the healthy baby. Fat is often manufactured at the expense of bone and muscle, and it is as important to change the diet of such babies as those who do not gain. The problem is not one of gain alone, but of well balanced growth.

The tables given above are for breast fed infants, and bottle fed infants seldom gain as rapidly during the first month, because the stomach must accustom itself to the cow's milk. After the first year, the gain in weight is not as important as during the first year of life.

DEVELOPMENT.

Fontanel: The opening in the skull (anterior fontanel) closes normally at the eighteenth month. If it remains open two years, something is wrong.

Mental Impressions: The infant seldom smiles before the fifth or sixth week. It does not recognize objects before the sixth or eighth week. Touch, taste, smell and probably hearing are more or less developed at birth.

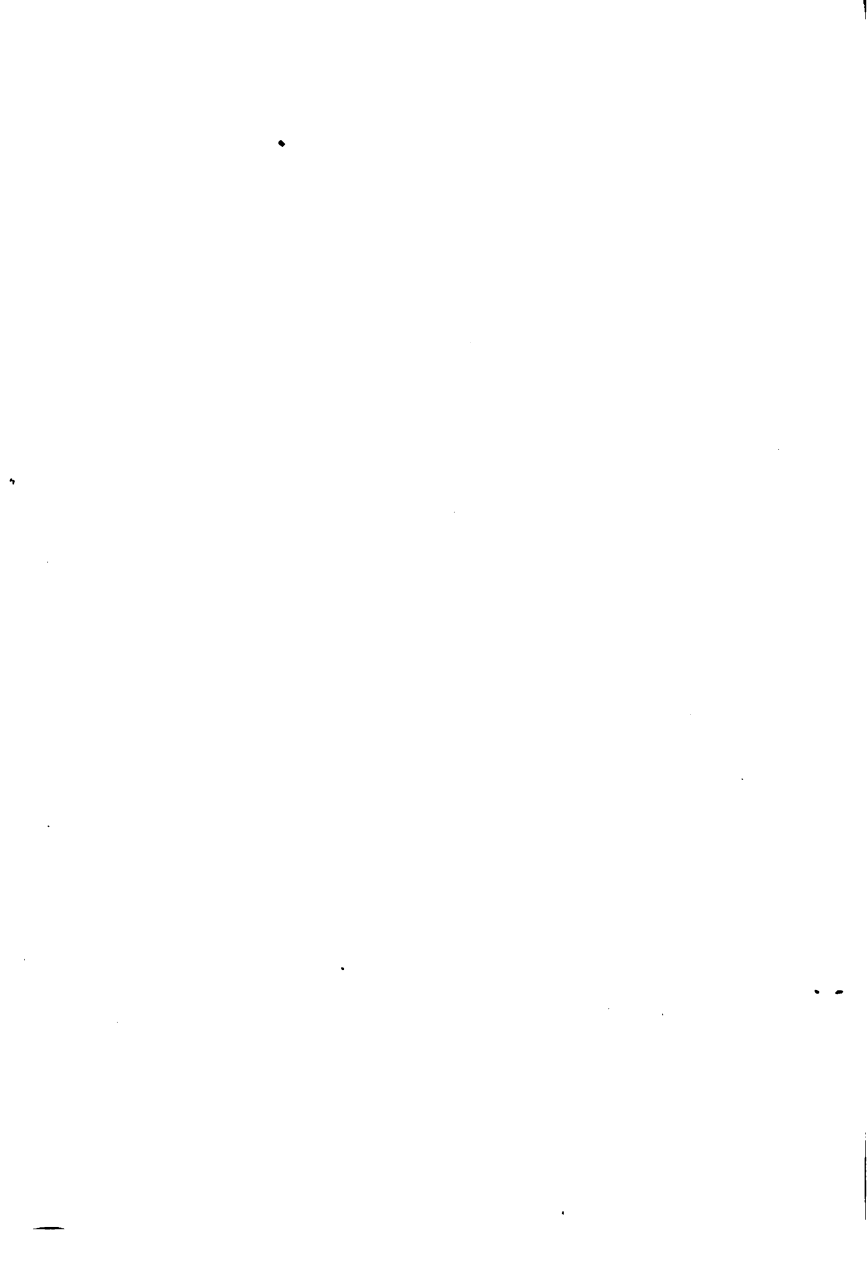
Voice : At about the twelfth month, infants begin to enunciate single words, and at two years form short sentences. They are likely to talk connectedly at three or four years, although there are great variations in individuals.

Sitting and Standing : The child can hold up its head usually at the third or fourth month. At seven or eight months a healthy infant is able to sit erect and support the body. From the ninth to twelfth month it will bear its weight upon its feet and stand without assistance. At the fifteenth or sixteenth month, the average child is able to walk or run alone. All these functions are likely to be delayed in delicate or sickly children or those who have passed through difficulties in feeding.

On account of the danger of deformities a child should never be urged to stand or walk. He will do this himself as soon as the muscles and bones are strong enough.

PART 2.

Feeding.



PART II.

Feeding.

MATERNAL FEEDING.

Under normal conditions, mother's milk furnishes the ideal nourishment for the baby. By normal conditions we mean that the mother should be strong and healthy, of even temperament, that she should have a sufficient supply of milk, and be willing to regulate her diet, sleep, exercise and general mode of living in such a way as to best fit her for her duty. The nursing mother must be prepared to sacrifice all other considerations to the welfare of her infant during the first twelve months of its life; and she should feel amply rewarded by the additional strength and vigor which she gives to her offspring by so doing.

However carefully we may study the question of artificial feeding, everyone admits that breast fed infants have a distinct advantage

over those artificially fed. It seems incredible that any mother should be unwilling to make even a great sacrifice when the future health of her offspring is at stake. Mothers are too apt to think that substitute feeding is as good as maternal feeding, and that the only considerations are those of convenience. As a matter of fact, substitute feeding should never be resorted to unless maternal feeding is impossible.

CONTRA-INDICATIONS FOR MATERNAL FEEDING.

Temperament: Mothers who have uncontrollable mental temperaments, hysterical women or those who are unwilling to nurse their infants, usually secrete milk which is changeable in quality and harmful to the infant.

Milk Supply: Those having deficient milk supply or an absence of milk, or those in whom the quality of the milk is impaired, must not nurse the baby. These conditions are not as common as is frequently thought and often they are due to the reasons given above.

Diseases: Mothers having serious chronic diseases, such as epilepsy, tuberculosis, cancer, etc., should not be allowed to nurse their babies. The same is true of mothers who for any reason are in such physical condition that nursing would be too great a drain upon their strength.

Pregnancy is generally a contra-indication for nursing.

Normal menstruation does not prevent nursing, except in some individuals during the monthly period.

NURSING.

Normally the secretion of milk in the breast becomes abundant from the third to the fifth day. Before this, however, a watery fluid known as colostrum is secreted and the baby may be placed at the breast as soon as convenient after birth.

Frequency of Nursing: The baby should nurse every two to two and a half hours during the day and twice during the night. Strong babies may frequently nurse at intervals of two and a half hours, while those

who are weak and small may have to be nursed every hour and a half at first.

Regularity in Feeding: It is wise to establish regularity in feeding from the start. Sleeping infants should be wakened at the nursing time. In a few days the infant will waken naturally and nurse at regular intervals. Such a method is not only more convenient for the mother and the nurse, but prevents an infant from overloading its stomach, a frequent result when it is allowed to nurse at will.

The period of nursing should be about fifteen to twenty minutes. One or both breasts may be used at each nursing, according to the amount of milk secreted.

Care of Breasts: The nipples should be cleansed with warm water and a bit of cotton after each nursing. Pieces of linen should be kept over the nipples between nursings to protect them from the clothing and to absorb any overflow from the breasts.

Sore Nipples: Sore nipples are a serious complication. They frequently become so cracked and fissured when neglected that nursing becomes impossible. For this reason

they should receive careful medical attention at the first indication of soreness. Early treatment is essential to prevent trouble. It is never wise to use local applications, unless prescribed by a physician, on account of the danger of drug poisoning to the nursing infant. A nipple shield should be used at the first signs of soreness.

REGIMEN.

The diet of the nursing mother need not vary materially from that which she is accustomed to take at other times. In the early days, however, the tendency is to give too much meat and solid food. In the majority of cases, light, easily digested, but plentiful diet is best while the mother is confined to her bed. Such a diet as milk, gruel, soups, vegetables, bread and butter, and, after the first week, light meats once a day. When the mother is up and has resumed her usual habits, the diet should be much increased. Meat may be taken twice a day, and fresh and stewed fruits may be taken as desired.

As to the articles of diet which should not

be taken by a nursing mother, it is almost impossible to lay down rules owing to the variation in individuals. Some mothers and some infants are susceptible to certain foods and these must, of course, be avoided. Every mother knows of certain articles of food which do not agree with her, and it would be folly to take them under such circumstances. Tea, coffee and alcohol should be excluded, and highly seasoned articles and rich pastries are undesirable.

When there is insufficient supply of milk, it may be increased by taking large quantities of liquids such as malted milk, cornmeal gruel and cocoa.

The general rule governing a nursing mother's diet is that she should have a variety of nutritious food in sufficient quantity to sustain and nourish herself and her infant.

Exercise: The mother should be encouraged to be out of bed as soon as her physical condition will allow, and regular exercise, preferably walking, should be insisted upon. The amount of exercise must, of course, be regulated entirely by the strength of the individual mother. Both lack of exercise and

over-fatigue have a bad effect upon the secretion of the milk.

Drugs: During the nursing period, drugs taken by the mother are quickly passed into the milk and frequently cause serious harm to the infant. For this reason the nursing mother should avoid powerful drugs unless prescribed by a physician. This is especially applicable to cathartics, and whenever possible, enemas or gluten suppositories should be resorted to after simple dietetic and physical means are tried. No cathartics should be taken during this period without a physician's advice.

THE NURSING INFANT.

The Well Nourished Infant: A breast fed infant is well nourished if the skin is clear and rosy, if it sleeps well after nursing, is quiet and good natured while awake, if the bowel movements are normal, the gain in weight regular, and the flesh, especially in the region of the thighs, is firm and hard to the touch.

The Poorly Nourished Infant: The poorly

nourished infant is pale, the skin seems almost transparent ; it suffers from colic and indigestion after feeding, and sleeps irregularly ; the movements are abnormal in consistency and contain undigested food ; the flesh is soft and flabby. If such a condition as this continues, it is necessary to add modified milk to the dietary, and in extreme cases to take the infant away from the breast entirely and feed artificially.

Vomiting and Indigestion : Vomiting after nursing is sometimes caused by taking the milk too rapidly or taking too much. This form of vomiting occurs very soon after nursing and is remedied by shortening the duration of the feedings, and interrupting them with occasional rests. The rapidity of the flow of the milk may be controlled by the mother by pinching the breast above the nipple with the thumb and forefinger while the infant is nursing. If the vomiting occurs some time after the feeding it is caused by indigestion, and it is wise to lengthen the intervals between the feedings. Vomiting may also be caused by moving the baby or playing with it immediately after nursing.

Vomiting, diarrhoea and constipation are more or less dependent upon the mother's physical and mental condition, and treatment should be directed to the mother rather than to the infant. Irregularity in nursing also disturbs the quality of the milk and causes these symptoms.

WEANING.

The time for weaning depends, of course, upon the quality of the mother's milk and the season of the year, but the same general principles apply to all periods. The infant's stomach must be accustomed to an entirely different form of nourishment from that which nature intended it to have. Cow's milk is different from mother's milk and the stomach must be gradually trained to digest it. Where we find that the mother's milk is becoming poor in quality and the child is losing weight, regardless of age, it is wise to begin at once to accustom the stomach to this new form of nourishment.

Method of Weaning: To do this, substitute for a morning and afternoon nursing a bottle

containing the lowest strength of formula. This is continued for a few days when the next strongest formula is substituted. By the time the baby is learning to take the bottle well and the stomach is becoming accustomed to the new food, a third bottle feeding can be substituted for a nursing. In this way continue very gradually to increase the number of feedings until the weaning is complete, and the formula has been reached upon which the infant thrives. Too much stress cannot be laid upon going slowly and cautiously in this process. It is always wiser to underfeed than to overfeed, and the bowels, weight and general condition must be carefully watched.

Rapid weaning is not desirable, but it is sometimes necessary. In this case, the child should be removed at once from the mother's breast, and the lowest formula substituted and gradually increased until the one which corresponds to the infant's needs is reached.

Hot Weather: It is not wise to wean an infant during the hot weather, because at this time there is more danger of intestinal disturbance, and the milk is more likely to be tainted.

Age for Weaning: With a normal breast fed infant, the weaning may take place from the ninth to the twelfth month. At this time the baby may be taught to take food from a spoon, but there is no serious objection to substituting a bottle if desired. Here again the same rules apply, and it is best to begin even at this age with a low formula, and increase it gradually up to the twelfth month, when the baby can take plain milk. A baby of nine or ten months should be started on the formula which is given in the tables for bottle fed infants, as proper for the fifth or sixth month. The strength of the formula can, however, be increased more rapidly than with younger babies.

Weaning should not be commenced when the infant is suffering from teething or any other illness.

Weaning is accomplished more easily if the child has been taught to take water from a nursing bottle or from a teaspoon before the actual weaning begins. This can be done easily after the sixth month and saves time and trouble later.

WET NURSE.

In some cases in which the mother cannot nurse her infant, it is necessary to procure the services of a wet nurse. In this country, however, wet nurses are not usually employed except when artificial feeding has been tried without success. The question as to which method should be employed is one for a physician to decide, and depends so much upon individual conditions that no general rules can be given.

Great care must be used in selecting a healthy nurse. She should be examined carefully by a physician, and during the nursing period her surroundings and habits of life should be carefully regulated.

SUBSTITUTE FEEDING.

Many substitutes for mother's milk have been utilized in the feeding of infants, but for practical purposes modified cow's milk has supplanted all others. In order to practice this method successfully, it is necessary to understand the principle upon which it is based.

There are three important food elements in milk; the fat or butter, the proteids which form curds, and the milk sugar. These three elements exist in both cow's milk and mother's milk, and although the proteids of cow's milk differ chemically from those of mother's milk, yet for practical purposes this difference may here be disregarded. But assuming that the constituents of cow's milk and mother's milk are practically the same, the quantities of these three elements differ markedly. This is illustrated in the following table:

	FATS.	PROTEIDS.	SUGAR
Mother's Milk, . . .	4 %	1.50 %	7 %
Cow's Milk, ...	2 to 4 %	3.50 %	4.75 %

It will thus be seen that mother's milk contains less proteid matter than cow's milk and more sugar.

MODIFIED MILK.

In order to so change cow's milk that it will correspond with mother's milk, we must add 2.25 per cent. sugar and we must take away 2 per cent. of proteid. When we have done this we have so "modified" the cow's

milk that it corresponds in percentage to the mother's milk. We may accomplish this by various methods, but whatever the method, the process is termed modification. The process of modification which is generally used in the household depends upon the use of a certain number of ounces of milk taken from the upper part of a quart bottle. The upper part of the bottle contains more cream or fat than the lower layers, while the percentage of proteid matter is practically the same throughout the bottle. Thus suppose we take a certain number of ounces of the richer milk from the top of the bottle, and find that it contains 8 per cent. of fat or cream instead of 4 per cent. which fresh milk contains. The proteids would remain practically unchanged at 3.50 per cent. If we now add an equal amount of water to this 8 per cent. top milk the fats are reduced one-half, so that we have the original 4 per cent., and the proteids are likewise reduced one-half so they are at 1.75 per cent. We have now rearranged the quantities of the constituents of the milk, and although this diluted milk contains exactly the same elements that fresh cow's milk con-

tains, we have succeeded in diminishing the amount of proteid matter and leaving the fat unchanged. The percentage of sugar is easily adjusted by adding milk sugar to the mixture.

This is the simplest illustration of modified milk and it is easy to understand that there can be as many different modifications as there are percentages. It is only necessary that we know the percentage composition of the milk which we use, and that we dilute it in a definite way. Assuming that we understand the principle of modifying milk, that is, changing the percentage composition of it, let us proceed to the practical application.

The Selection of Milk: The problem of selecting milk in the country is much simpler than in the city, because we can eliminate the danger of contamination in the interval which elapses between the time of milking and reaching the home. This period is sometimes as long as twelve hours in the city. The best safeguard at present in large cities is to use certified milk, which is procured and transported under the direct supervision of the Board of Health. This milk is clean and free from disease germs, and contains a mini-

mum number of other germs. The dairies charge more for it than other milk, but their price is not unreasonable.*

Milk for infant feeding should be mixed milk from a herd of cows rather than the milk of one cow. When there is any choice, milk from Holstein or Durham cows should be selected.

Preparation: As soon as it is milked, the milk should be strained through several layers of gauze, which has previously been boiled, directly into quart bottles which have also been thoroughly washed and boiled. These glass bottles should then be placed in a receptacle containing ice and water. The top of the bottle is left open for fifteen or twenty minutes until the animal heat has escaped, after which it is closed tightly like a preserve jar and allowed to remain for two to four hours. The bottle may then be removed

* Certified milk can be obtained in New York at the following dairies: Briarcliff Farms, Windsor Arcade; Thorndale Farms, 901 Sixth Avenue; Locust Farms Co., 812 Sixth Avenue; Sheffield Farms Co., 583 Park Ave.; The Gove Dairies, 832 Amsterdam Avenue; Daheim Stock Farm, 2 Rector Street, Richfield Dairy, 3167 Seventh Avenue.

carefully without shaking, the neck of the bottle wiped with clean cotton, and it is ready for use.

In order to remove the upper part of the bottle (top milk), it is necessary to procure a round-bottom Chapin dipper. This dipper holds exactly one ounce. It has a long upright handle, so attached that it can be passed down into the bottle. These dippers are made of either tin or aluminum, costing ten or twenty cents each, and may be procured at almost any of the larger drug stores or directly from the Cereo Company, Tappan, New York.

In order to remove the top milk, the dipper and a teaspoon, both of which have been boiled and are taken directly from the water without coming in contact with anything else, are needed. The top ounce is carefully dipped out with the teaspoon and measured in the dipper, and from the dipper it is turned into a clean agate or earthenware vessel which has also been boiled. Now that the top ounce has been dipped out with the teaspoon, the dipper can be lowered into the bottle, using great care not to stir the milk, and the upper

layers removed ounce by ounce, until the number of ounces of top milk required by the formula have been removed from the bottle and deposited in the basin. It may be necessary to use one or more quart bottles of milk according to the amount required by the formula, but after the required number of ounces of top milk have been removed from the bottle, we have no further use for the milk remaining, except when the formula calls for "fat free" milk which is the bottom eight ounces of the bottle. The top milk in the basin is now thoroughly stirred with the spoon which was first used, and this milk forms the basis of the mixture. It may be set aside and covered with a clean cloth for the few minutes that the other parts of the formula are being prepared.

Let us suppose, for example, that we are preparing formula number one for a baby a week old. This formula calls for sixteen ounces of top milk as a basis of the food. This means that the top sixteen ounces of a quart bottle are to be removed in the manner described. In order to make sufficient food to last the baby twenty-four hours, we must pre-

pare thirty-two ounces. To make this quantity, we use four ounces of the mixed sixteen ounce top milk, twenty-eight ounces of water, and four even tablespoonfuls of milk sugar. The water is carefully measured, the milk sugar added to it and the whole brought to the boiling point. It is then allowed to cool and the four ounces of sixteen ounce top milk added to it and thoroughly mixed. This mixture is the food the baby requires. At this age an infant takes one and a half ounces of this food every two hours during the day and twice at night. It is best to provide enough nursing bottles to last through the day; in this case, nine bottles. One and a half ounces of the mixture are put into each bottle, the tops carefully closed with cotton and all placed in the refrigerator.

At each feeding time one bottle is taken out, the cotton removed, the rubber nipple (which has previously been cleansed and boiled) is attached to the bottle; the whole bottle is shaken gently until the food is mixed. It is then immersed in warm water until the food is sufficiently warm to be taken (about body heat). It is now ready for the baby.

A flannel bag to cover the bottle will re-

tain the heat, prevent the bottle from slipping, and absorb moisture.

When the bottle is empty, it is thoroughly washed with hot water and soap, and cleansing brushes which are sold for that purpose are used to reach the inner surfaces of the bottle. The rubber nipple is treated in the same way and must be carefully cleansed. This is best accomplished by turning it inside out. The nipples and bottles are boiled or steamed for 15 minutes in a double boiler or sterilizer immediately before refilling.

A 16 ounce glass graduate is very convenient for measuring, and a spoon with a long handle similar to those used at soda fountains is best for mixing the formula.

A wide mouth nursing bottle with no shoulders or rims, having a smooth surface inside and outside, is the best. Such a bottle is that known as the Hygeia, and sold at most drug stores. Instead of using cotton to close the neck of this bottle, it is more convenient to use the inverted nipple.

The nipple which goes with this bottle is satisfactory in the majority of cases. A nipple with a medium sized opening should usually be selected. There is no one nipple that is

best for all babies, and sometimes a little experimenting is necessary before a satisfactory one is found. Different babies seem to prefer different shaped nipples. A nipple which cannot be turned inside out should be avoided, and the softer the rubber, the better. Sore mouths are frequently caused by too hard nipples as well as unclean nipples.

Utensils: The utensils necessary for preparing the food in this way are as follows:

One Chapin dipper.

One long handled teaspoon.

One tablespoon.

One 16 ounce glass graduate.

One heavy glass or agate ware funnel.

Two 2 quart sauce pans of agate ware, with handles.

One dozen nursing bottles and nipples.

One wire basket for holding the bottles upright.

One large double boiler or covered vessel for sterilizing bottles and other utensils.

Sterilized absorbent cotton for stopping bottles should be procured in sealed packages at the drug store, several of the smallest size packages being preferred. Only one package should be opened at a time.

MILK FORMULAS

FORMULAS FOR THE FIRST MONTH.

The basis of these formulas is the top 16 ounces of a quart bottle of milk.

Constituents	Feedings in 24 hours	Frequency of Feedings	Amount of Feedings	Total Ounces of Mixture	*Percentage Composition
Formula No. 1 Top Milk, 4 oz. Water, 28 oz. Milk Sugar, 4 Level Tablespoonfuls	9	Every 2 hours during day and twice at night	1½ oz.	32 oz.	Proteids, .40% Fats, .88% Sugar, 6%
Formula No. 2 Top Milk, 6 oz. Water, 26 oz. Milk Sugar, 4 Level Tablespoonfuls	9	Every 2 hours during day and twice at night	2 oz.	32 oz.	Proteids, .50% Fats, 1.3% Sugar, 6%
Formula No. 3 Top Milk, 8 oz. Water, 24 oz. Milk Sugar, 4 Level Tablespoonfuls	9	Every 2 hours during day and twice at night	2 oz.	32 oz.	Proteids, .80% Fats, 1.7% Sugar, 6%
Formula No. 4 Top Milk, 10 oz. Water, 22 oz. Milk Sugar, 4 Level Tablespoonfuls	9	Every 2 hours during day and twice at night	2½ oz.	32 oz.	Proteids, 1% Fats, 2.2% Sugar, 6%

*Percentage compositions are added to these formulas for the information of physicians who find it necessary to make changes from them. They may be ignored by mothers and nurses.

MILK FORMULAS

FORMULAS FROM THE END OF FIRST MONTH TO THE END OF FIFTH MONTH.

The basis of these formulas is the top 16 ounces of a quart bottle of milk, and barley water is used as a diluent instead of boiled water.

6

Constituents	Feedings in 24 hours	Frequency of Feedings	Amount of Feedings	Total Ounces of Mixture	Percentage Composition
Formula No. 5 Top Milk, 12 oz. Barley Water, 20 oz. Milk Sugar, 4 Level Tablespoonfuls	7	Every 2½ hours during day and once at night.	3 oz.	32 oz.	Proteids, 1.2% Fats, 2.6% Sugar, 6%
Formula No. 6. Top Milk, 14 oz. Barley Water, 18 oz. Milk Sugar, 4 Level Tablespoonfuls	6	Every 3 hours during day and once at night	3½ oz.	32 oz.	Proteids, 1.4% Fats, 3% Sugar, 6%
Formula No. 7 Top Milk, 16 oz. Barley Water, 16 oz. Milk Sugar, 4 Level Tablespoonfuls	6	Every 3 hours during day and once at night	4 oz.	32 oz.	Proteids, 1.6% Fats, 3.5% Sugar, 6%
The top 16 ounces from two quart bottles must be removed for this and following formulas.					
Formula No. 8 Top Milk, 18 oz. Barley Water, 14 oz. Milk Sugar, 4 Level Tablespoonfuls	6	Every 3 hours during day and once at night	5 oz.	32 oz.	Proteids, 1.8% Fats, 3.9% Sugar, 6%

MILK FORMULAS

FORMULAS FROM THE END OF THE FIFTH MONTH TO THE NINTH MONTH.
 11-ounce top milk instead of 16-ounce top milk is used as a basis for these formulas. FAT FREE MILK is milk which contains no cream. The bottom 8 ounces of a quart, which is allowed to stand for four hours or more, is FAT FREE MILK.

Constituents	Feedings in 24 hours	Frequency of Feedings	Amount of Feedings	Total Ounces of Mixture	Percentage Composition
Formula No. 9 Top Milk, 16 oz. Fat Free Milk, 7 oz. Barley Water, 17 oz. Milk Sugar, 3 Level Tablespoonfuls	5	Every 3 hours during day. None at night.	6 oz.	40 oz.	Proteids, 2% Fats, 4% Sugar, 7%
Formula No. 10 Top Milk, 16 oz. Fat Free Milk, 12 oz. Barley Water, 12 oz. Milk Sugar, 3 Level Tablespoonfuls	5	Every 3 hours during day.	6 oz.	40 oz.	Proteids, 2.5% Fats, 4% Sugar, 7%
Formula No. 11 Top Milk, 16 oz. Fat Free Milk, 16 oz. Barley Water, 8 oz. Milk Sugar, 3 Level Tablespoonfuls	5	Every 3 hours during day.	6 oz.	40 oz.	Proteids, 3% Fats, 4% Sugar, 7%
FORMULA FROM THE NINTH TO THE TWELFTH MONTH					
Undiluted Milk Milk Sugar, 3 Level Tablespoonfuls	5	Every 3 hours during day	6 oz.	40 oz.	

MILK DILUENTS.

Water is ordinarily used to dilute the milk in preparing the formulas. It is, however, sometimes desirable to use other diluents in place of all or part of the water in the formula. The principal ones are barley water or oatmeal water. Robinson's Prepared Barley, Quaker Oats, or the barley and oatmeal flour prepared by the Cereo Company, of Tappan, New York, may be used. They are prepared as follows :

One tablespoonful of barley or oatmeal is added to a quart of water. This is allowed to cook slowly until only a pint remains. It is then strained and sufficient water added to it to make a quart. This is once more brought to the boiling point and allowed to cool quickly, when it is ready for use. Rice water may be prepared in the same way.

It is sometimes desirable to dextrinize these gruels. This is accomplished by adding a teaspoonful of diastase (cereo). This causes the gruel to become thin and partially digested. It is useful in cases where the plain gruel causes colic.

Whey: It is frequently necessary to use whey as a diluent. This is prepared by adding two teaspoonfuls of Fairchild's Essence of Pepsin to a pint of fresh milk which has been warmed (not over 100°). Stir gently and allow it to stand until firmly jellied. Beat with a fork until it is finely divided and strain off the whey (liquid part). The whey is then brought to the boiling point and cooled rapidly, when it is ready to use.

SALT.

All the food which the baby receives should contain a certain amount of common salt. This is to be dissolved in the water or whatever diluent is used for the formula. For a formula containing thirty-two ounces, not more than one quarter-teaspoonful should be used.

LIME WATER.

In the formulas herein given lime water is not included. If fresh, pure milk is used, and care in preparation, lime water is almost

never required. When it is needed, it should be given under a physician's direction and not indiscriminately.

Its use was originally based upon the supposition that cow's milk was acid, and this we now know is not so. In the large quantities which were formerly given, lime water caused over-secretion of the acid of the stomach and is no doubt responsible for many cases of indigestion in older children and adults.

Mothers are too apt to resort to lime water in the food when there is slight sourness or regurgitation, forgetting that the normal reaction of the stomach contents is acid, and that the true remedy lies in a change of food to one which is more easily digested.

If babies are started on formulas without lime water, it is very rarely necessary to use it, but if they once become accustomed to it, it is difficult to withdraw it.

PASTEURIZED MILK.

If it is necessary to pasteurize milk, the apparatus known as the Hygeia Pasteurizer is the most convenient. The bottles are closed

with cotton and placed in the pasteurizer, and the milk is then subjected to a temperature of 150° to 160° Fahrenheit for half an hour, and is then rapidly cooled. If properly carried out, pasteurization destroys disease germs in the milk and prevents souring for a time. The taste and character of the milk are slightly changed by the process.

STERILIZED MILK.

Sterilization is the process of heating the milk to the boiling point (212° Fahrenheit). It is accomplished by using the Hygeia Sterilizer, or the bottles well corked with cotton may be simply placed upright in boiling water and allowed to remain for twenty minutes, after which they are rapidly cooled by placing them in cold water.

PASTEURIZATION AND STERILIZATION.

The question of pasteurization and sterilization has received a great deal of attention at the hands of medical and other authorities.

Of the two methods, pasteurization is the least harmful, but the fact remains that milk which has been subjected to any temperature sufficient to destroy disease germs is so changed that its effect is quite different from that of fresh milk. The ideal to be attained is a supply of clean, pure, fresh, cow's milk. This is easily procured in the country and in small cities, and in cities like New York it is to be had at a slight additional expense from certified dairies. The general use of the process of pasteurization would tend to promote carelessness in the care and handling of milk by dairymen, and for this reason it is to be discouraged. When the baby's health is to be considered it is little short of criminal negligence to substitute pasteurized milk or sterilized milk for certified milk because the former are cheaper. The question resolves itself into choosing between milk in which the bacteria have been destroyed by heat, and clean milk which is practically free from bacteria.

Among people who are not able to pay the extra price for pure milk, it would seem that it is the plain duty of the community to assist them. Upon this depends, to a large extent,

the health and strength of the coming generation.

Whenever the supply of milk becomes, for any reason, temporarily unsafe, it is permissible to use pasteurized milk until pure milk can be obtained. Under no circumstances should it be used continually. If there is any question as to the sweetness of the milk, it would be better to discard entirely the day's allowance and use instead barley water.

PEPTONIZED MILK.

Peptonized milk is milk in which the proteids (curds) have been partially or entirely pre-digested. It is accomplished by the addition of peptonizing powders to the milk. These powders contain Pancreatic extract and Sodium bi-carbonate. One powder is dissolved in a quart bottle of plain or diluted milk; the bottle is immersed in water at 110° Fahrenheit and allowed to remain there ten to twenty minutes if partial peptonization is desired, or for two hours if it is to be completely peptonized. The process of peptonization is checked by heating the milk to the boiling point.

The preparation known as peptogenic milk powder (Fairchild's) is a convenient one for peptonizing milk. Peptonized milk is often necessary for babies who are sick, or premature infants that have weak digestive powers. It should only be resorted to under a physician's direction. It is not advisable to use it for a long period of time, because it does not stimulate and develop properly the digestive functions of the stomach.

INFANT FOODS.

There is no infant's food except modified cow's milk which can be used continually with any degree of success. Nearly all proprietary foods are simply cereals and owe most of their efficacy to the milk which is mixed with them in preparing. They have the great disadvantage of containing an excessive amount of sugar. This produces fat so that the baby gains rapidly in weight, but this is too often at the expense of bone and muscle. The same is true of condensed milk. Any one of these preparations may be useful during an illness or for a short time, but they should never be used for a long time.

Many cases of scurvy and rickets are due to the prolonged use of condensed milk and proprietary foods, and infants which have been fed on these preparations lack to a marked degree the resistive power necessary to overcome disease.

TRAVELLING.

It sometimes happens that it becomes necessary to take long journeys with young infants under such circumstances that it is not possible to carry a sufficient supply of milk to prepare fresh food. Usually a day's supply of food can be prepared before starting and the nursing bottles packed in a pail of ice. When these are exhausted, condensed milk, properly diluted, should be used. There is much less danger in using condensed milk for a short time than in depending upon the fresh milk provided en route.

The excitement of a journey may cause indigestion and it is best at such times to give less food than usual. It is also wise to provide a supply of some bottled spring water instead of depending upon the water obtained en route.

GENERAL DIRECTIONS FOR ARTIFICIAL FEEDING.

The formulas given here are intended for average healthy babies. In case the baby does not thrive on these formulas, it is necessary to make a change and a physician should be consulted.

It is always best to underfeed rather than to overfeed at the beginning, and radical changes in the formulas should not be made.

The change from one formula to another should be gradual, and this is best accomplished by adding each day or every other day to the mixture one more teaspoonful of top milk of the required strength and taking away one teaspoonful of water. This may be regulated to suit the demands of the baby so the change may be made quickly or slowly.

If the baby seems hungry, cries after nursing, or does not sleep, the formula should be strengthened in quality. The constituents of the formula and the quantity of the nursing should never be increased at the same time. The food should not be increased if the child seems satisfied, sleeps well, and is gaining from six to eight ounces a week.

If the infant vomits large quantities immediately after nursing, it is probably because too much food is being given, or the opening in the nipple is too large, and the food is being taken too rapidly.

If the vomiting is persistent, and occurs at longer intervals after nursing, or if it is accompanied by pain, and if there is regurgitation of food, it is due to indigestion, and the food should be weakened.

Oftentimes there will be slight symptoms of indigestion for the first day or two that a new formula is used. This need cause no alarm. It simply means that the infant's stomach is adjusting itself to the new food.

Each bottle should be warmed immediately before being taken. Bottles for the night feedings should be kept on ice until needed and then warmed. They should never be kept warm through the night. The temperature of the milk should be tested by allowing a few drops to flow from the opening in the nipple upon the back of the hand. It should be about body temperature. The opening in the nipple should be of such size that the milk comes through drop by drop and not in a stream.

- The nurse should hold the bottle during the feeding. It should be held in such a way that the flow of milk is continuous. The duration of the feeding should never be less than fifteen minutes. If it is desired to interrupt the feeding, the nipple should be removed from the baby's mouth, and when the bottle is empty it should be removed at once.

The baby should not be allowed to fall asleep during the nursing. After the nursing is finished, the baby falls naturally into a sound sleep, but the habit of sleeping for a few minutes and then waking for more food should not be allowed. The baby should not be moved or taken up directly after nursing and should never be played with at that time.

STOOLS.

Normal stools are soft, yellow, and occur from one to three times a day.

If the stools become loose, green, or contain undigested curds, the formula must be changed and the infant must receive medical attention. This is especially important if the stools are accompanied by colic and vomiting. These

conditions appearing in hot weather are alarming and must not be neglected. Temporarily all milk should be withdrawn and barley water used instead.

Constipation is more common in artificially fed infants than in breast fed. It is due to different causes but need not cause alarm, provided there is one movement daily.

In the majority of cases it is necessary to make a change in the formula. It is sometimes helped by substituting one tablespoonful of brown sugar for one tablespoonful of the milk sugar in the formula. Often the addition of a few ounces of oatmeal water in the formula in place of the same number of ounces of boiled water or barley water is sufficient for a cure. In infants over nine months, orange juice or prune juice may be given, a teaspoonful at a time. In older children where the condition tends to become habitual, the child should receive careful medical attention, and should never be dosed indiscriminately with cathartics. Olive oil only may be given.

FEEDING FROM THE TWELFTH TO THE EIGHTEENTH MONTH.

By the thirteenth or fourteenth month the baby will usually take cereals in addition to milk.

Barley, farina, or oatmeal, in the form of a thick gruel, strained, can be given.

Crackers or zwieback, soft boiled eggs and beef juice may be added gradually to the dietary during this period.

The food should be divided into about five meals daily.

FEEDING FROM THE EIGHTEENTH MONTH TO THE END OF THE FOURTH YEAR.

Five meals should be given in the 24 hours, consisting of milk, soft boiled eggs, soup or beef juice, vegetables, cereals, meat in small quantities.

The general outline of the dietary is as follows :

Breakfast : Juice of an orange, baked apple or apple sauce, cereal, glass of milk, bread or crackers.

10.30 A. M.: Glass of milk and zwieback or toast.

Dinner, 1 P. M.: Soup, meat (beef, lamb, chicken or fish, not more than 2 ounces), simply cooked vegetables, stewed fruit.

4 P. M.: Glass of milk or cocoa, and toast or crackers.

Supper, 6 P. M.: Soft boiled egg, milk, cream cheese, crackers or toast, or farina and milk, junket or sea moss blanc mange.

Milk and butter should be taken with each meal.

As the child grows older, the amount of food must, of course, be increased and variety added. The individual child must be considered and a liberal mixed diet provided. A growing child needs nourishing food and food which is not difficult to digest. Milk, cream, butter, eggs and cereals meet these requirements, and should form the larger part of the dietary. Meat and vegetables are desirable, but should not be used excessively. Coffee and tea are harmful to growing children and cocoa should be used instead. This should be prepared from "cracked cocoa" rather than the powdered form and should be very thoroughly cooked.

From the beginning the child should be taught to thoroughly masticate the food, to eat slowly and not to wash the food down half chewed, with the liquids taken. Water should be taken freely between meals. Children should not be allowed to drink water which is ice cold.

ARTICLES FORBIDDEN.

The following articles should not be given to children under four years :

Meats : Sausage, pork, game of all kinds, kidney, liver, or meat served with rich gravies.

Vegetables : Green corn, cucumbers, raw tomatoes.

Desserts : Pies, tarts, cake and pastries of all kinds.

Fruits : Bananas should be avoided except in small quantities, thoroughly mashed through a sieve and served with cream.

The habit of allowing children to eat their meals at the table with the rest of the family is a bad one, as there is constant temptation for them to eat improper food.

The child's likes and dislikes should be consulted to a certain extent, but it should not be allowed to become dainty and wilful about food. It is not always easy to steer a rational middle course, but if the child is taught from the start to eat milk and eggs freely, the larger part of the problem will be solved. Even if the strongest discipline is necessary to accomplish this, it is well worth while, and it may prove the means of saving the child's life in later years.

For similar reasons, the desire for an excessive amount of sweets should be discouraged. Milk chocolate in small quantities is permissible, and simple sweets may occasionally be allowed, but rich cake and pastry are especially harmful.

SPECIAL RECIPES.

BEEF JUICE.

Select a piece of meat from the rump or upper part of the round. Broil or warm slightly for one or two minutes, and squeeze the juice into a slightly warmed cup. Add salt if necessary and serve at once. Prepare only enough to serve as it does not keep well.

BROTHS—Mutton, Chicken or Beef.

Wipe meat, remove fat and skin and cut into small pieces. Put in kettle with bones and add one cup of cold water, and let it stand half an hour to extract the juices. Heat gradually to the boiling point, season with $\frac{1}{2}$ teaspoonful of salt, and let it simmer for two hours until the meat is tender. Remove the fat and strain through a coarse sieve. Three tablespoonfuls of rice or barley may be added if desired. Soak barley over night, add to broth and cook until grains are tender. If the broth is made the day before it is to be used, it can be cooled thoroughly and the fat easily removed.

BOILED EGG.

A fresh egg is placed in boiling water in a covered dish, which is immediately removed from the fire. The egg then cooks slowly in the water, which gradually cools, for seven or eight minutes, when the white should be about the consistency of jelly.

CRACKER PANADA.

Break four hard crackers into pieces and bake until brown; add one quart of water and

boil 15 minutes. Allow this to stand 3 or 4 minutes and strain off the liquid through a fine sieve; season with salt and a little sugar or butter.

CRUST COFFEE.

Take some pieces and crusts of white or brown bread and dry in a slow oven until thoroughly hard and crisp. Place in mortar and pound or roll. Pour boiling water over these crumbs and soak for about 15 minutes. Strain and serve the liquid with salt or sugar.

JUNKET.

Heat one cup of fresh milk until luke-warm; add $\frac{1}{4}$ of a junket tablet dissolved in one teaspoonful of cold water. Allow it to jelly in a warm place; then cool in refrigerator.

BARLEY JELLY.

Soak three tablespoonfuls of pearl barley over night. Then place this in one quart of fresh water, add a pinch of salt, and cook in a double boiler for four hours, down to one pint, adding water from time to time. Strain through muslin.

ARROWROOT GRUEL.

Mix 2 tablespoonfuls of arrowroot, 1 teaspoonful of sugar, 1 saltspoonful of salt and 2 tablespoonfuls of cold water to a smooth paste. Add 1 cup of boiling water, stirring constantly. Boil 20 minutes, then add two cups of warm milk and bring to boiling point.

INDIAN MEAL GRUEL.

Mix 1 tablespoonful of Indian meal, $\frac{1}{2}$ tablespoonful of flour, $\frac{1}{4}$ teaspoonful of salt and 2 tablespoonfuls of cold water into a smooth paste. Add $1\frac{1}{2}$ cups of boiling water. Boil on back of stove for one and one-half hours. Dilute with milk and strain.

BROWNEO FLOUR GRUEL.

Brown a tablespoonful of flour in the oven or on top of a stove in a baking tin. Mix to a smooth paste with 2 tablespoonfuls of cold water. Put this into half a pint of fresh milk, and stir over fire until it comes to a boil. Add a pinch of salt and a teaspoonful of cold water.

DOUBLE BAKED BREAD.

Either stale or fresh bread may be used. Cut in thin slices and place in the oven, with

door open, and dry quickly until it is crisp, but not browned.

IRISH MOSS BLANC MANGE.

Soak $\frac{1}{4}$ cup of Irish moss in cold water for 15 minutes. Remove from water and add the moss to 2 cups of milk and cook about 20 minutes in a double boiler. Add salt, strain, and flavor with vanilla. Serve cold with cream.

PART 3.

**The Care of Children
in Illness.**



PART 3.

The Care of Children in Illness.

GENERAL SIGNS OF DISEASE.

ACUTE DISEASES.

Vomiting: In a large majority of cases, serious illness in infants and children is ushered in by vomiting. This symptom takes the place of the chill, which so often marks the onset of disease in adults. It is not always easy to tell, at first, whether the attack of vomiting indicates the beginning of a serious illness or is due to acute indigestion. In the latter case it is usually possible to trace the attack to some indiscretion of diet, and these sudden attacks of indigestion are likely to be relieved within a few hours after the stomach is emptied. In the onset of more serious diseases, however, although the vomit-

ing may cease, the general condition of the child does not improve and the temperature remains high.

Temperature : The temperature should be taken in the rectum or the fold of the groin, the thermometer remaining in place for two minutes. In selecting a thermometer for use with children, one made of heavy glass is preferable. In taking the rectal temperature, the thermometer should be lubricated with vaseline and inserted very gently and with a rotary motion. The thermometer will take the right direction itself if inserted slowly and gently. Never use force in passing the thermometer into the rectum.

In taking the temperature in the groin, the thermometer is laid in the fold of the groin, with the lower end of the thermometer pointing inward. The thigh and leg are flexed so that the thermometer is held firmly in place by the pressure. If the leg is held firmly in this position and the tip of the thermometer steadied by the thumb and finger for the required length of time, no harm can come from the movements of the child.

The temperature is apt to vary from 98° to

100°. The temperature in the rectum is approximately a degree higher than in the groin.

Slight causes will produce an increase of temperature in a child. For example, it is not uncommon even in mild attacks of indigestion to find a temperature of 103° or 104°. Such temperatures, however, disappear quickly when their cause is removed. Any temperature over 100°, unless the cause is perfectly clear, should be considered alarming. This is especially true if the rise of temperature lasts more than 24 hours. A high temperature of short duration is not necessarily a sign of serious illness, but any prolonged rise of temperature or a gradually increasing temperature, especially if the cause is doubtful, requires immediate attention.

Respiration: The character as well as the rapidity of the respiration is of importance. Labored breathing, breathing in which there is a "catch" at the end of the inspiration, shallow breathing, and breathing which is gasping in character, are all important types found in serious diseases. When one of these abnormal types of breathing occurs in connection with a high temperature, there is ground

for suspicion of pneumonia or other serious disease of the lungs, whether cough exists or not.

The respiration is affected by excitement and other causes, and should always be counted while the child is asleep. Respiration exceeding 45 to the minute should be investigated.

Pain : Pain is indicated by the character of the cry, by the movements of the infant, and by indication of pain when it is touched or moved. Older children will often indicate the location of the pain, but their sensations are oftentimes misleading. For example, it is very frequent in pneumonia or pleurisy to find the child placing its hand on its stomach as the seat of pain, instead of the chest.

Sleep : Whether the child sleeps quietly and comfortably is of great importance. Sick children are restless, tossing about in the bed, sleep lightly with frequent waking, and often awaken with pain or a sharp cry. In some diseases the eyes are rolled upward during sleep so that only the whites can be seen, or the eyes may be only partially closed.

Children who breathe through their mouths or snore during sleep, should be examined by

a physician for adenoids or other growths in the posterior part of the nasal passages.

Skin: The normal color of the skin of a healthy infant is best described as rosy. In sickness the skin becomes pallid, sometimes almost bluish. In the onset of acute diseases the skin is likely to be dry and hot to the touch. The face either becomes pale and drawn, or, where there is a high temperature, the cheeks are brightly flushed.

To recapitulate, then, acute diseases are marked by vomiting at the onset, temperature above 100° which remains constant, rapid respiration, restlessness, hot, dry, flushed skin, and pain.

CHRONIC DISEASES.

Nervousness: The term nervousness covers a large number of symptoms; twitching of the hands and feet, irritability, fear, especially at night, lack of interest in every day surroundings, inability to sit or lie quietly, headaches, bad habits and similar phenomena. Such symptoms usually occur in connection with others, and their cause should be carefully looked into.

Loss of weight: Failure to gain in weight should always cause alarm. It is usually accompanied by poor or fickle appetite, and is a sign which should never be disregarded.

Cough: Cough, even though it be slight, which lasts for several weeks or more, is a danger signal. If it follows a bad cold or a disease like measles or pneumonia, it is especially important. No harm is ever done by making a careful physical examination of a child's lungs, and oftentimes their future usefulness is saved by this precaution.

REMEDIES.

The following list of homœopathic remedies is recommended for use in the nursery:

Aconite 3x, Arsenicum 6x, Belladonna 6x, Bryonia 6x, Calcarea carb. 30x, Chamomilla 3x, Cuprum met. 12x, Ipecac 6x, Nux vomica 6x, Spongia 3x.

For external use: Homœopathic tincture of Calendula, homœopathic tincture of Arnica.

These remedies may be procured in the proper strength at a homœopathic pharmacy. They should be kept tightly corked in a case, and should never be allowed to remain open.

Those for internal use should be in the form of medicated pellets.

Unless otherwise directed, they should be administered by dissolving 6 pellets in half a glass of cold water (preferably distilled or pure spring water) and given to the patient, one teaspoonful every one-half to two hours, according to the severity of the attack. It is usually wise to give the first four doses at frequent intervals (every half hour), and, as the patient improves, to diminish the frequency of the dose to every one or two hours, stopping the remedy immediately as soon as marked improvement occurs.

The glass containing the medicine should be washed and scalded in hot water and cooled before mixing the medicine. It should be kept covered and in a cool place. The spoon should not be allowed to remain in the glass, but should be kept on top, and should be used for the medicine only. It is wise to have a glass medicine spoon for this purpose.

Homœopathic remedies, owing to the small amount of the drug which is contained in them, are harmless. They never produce the bad effects, which are so often seen as the re-

sult of excessive medication. Children especially react promptly to these remedies and oftentimes two or three doses are sufficient. This is vouched for by the large number of parents who employ homœopathic treatment with success for their children, when they themselves prefer the old-time heroic dosing.

It should be remembered that the administration of remedies is only one part of the physician's work, and the directions herein given are not intended to take the place of a physician's services. Valuable time may be lost by postponing the visit of a physician. Especially is this true of those ailments, the cause of which is not entirely clear. The directions given here are intended only as hints for the management of simple ailments when a physician is not at hand.

The best means of preventing disease is a knowledge of the early danger signs, and every mother should be able to recognize these warnings.

Every child should be thoroughly examined by a physician at least once a year. Such a precaution is not only the best preventive measure against disease, but it also enables

the physician to give specific advice as to diet, exercise and hygiene, which may be of the greatest importance in aiding the proper growth and development of the child.

NURSING.

The fundamental principle in nursing a child during illness is *absolute* and *complete* rest. This means not only that the child should be kept at rest in bed, but that the digestive organs should be rested also by the lightest possible diet. Older children should be kept on milk, and with artificially fed infants, the food should be diluted at least one-half. Children should never be urged to eat if there is no desire for food. A few hours' fasting at the beginning of an illness does no harm and will often allow an irritable stomach to become rested.

The room should be well ventilated, quiet and not too light. It is always wise to be prepared for contagious diseases, and in cases which are suspicious, and in which the diagnosis has not been established, it is better to isolate the patient from the other members of

the family. For the same reason it is better to remove from the sick room, all articles which cannot be easily disinfected. The general rules previously given for the nursery apply equally well for the sick room.

Meddlesome nursing is worse than none. Children, if fairly quiet, should be left alone. They should not be talked to and entertained. The nurse's attitude should be one of continual watchfulness rather than aggressive activity.

Homœopathic physicians require detailed information as to the condition of the patient. No symptom is too trivial to record. Sometimes the selection of the right remedy depends entirely upon the powers of observation of the nurse.

External applications, gargles, and mouth washes should never be used except when directed. Cathartics are almost never used for children. When necessary, enemas can be resorted to. Drugs and other articles having a strong odor, like perfumery and camphor, should be rigorously excluded from the sick room. Pure air has no odor.

Enemas: For enemas it is best to use a

rubber fountain syringe. A soft rubber catheter makes the best tip. If it is only desired to obtain a movement of the bowels, about an inch of the catheter is passed into the rectum and a cupful of warm soap suds is allowed to run into the bowel slowly. The bag should not be held high and the flow should be interrupted occasionally.

When it is desired to wash out the bowel, the same apparatus may be used, but a larger quantity of liquid (from a pint to a quart), and the buttocks of the child should be elevated. Care should be used not to allow the water to flow too rapidly or with too much force.

It is sometimes desirable to use pure olive oil, 1 to 2 ounces. The oil should be warmed and allowed to enter the rectum very slowly. Olive oil and warm water, 1 ounce to the pint, is frequently useful in cases of extreme constipation.

HOT AND COLD APPLICATIONS.

In applying either heat or cold, it is necessary to apply it continuously, changing the cloths frequently, never allowing the compresses to reach body heat.

Cloths wrung out of ice water may be laid on the forehead when there is high temperature. They must be changed at least every five minutes or oftener if necessary. The cloth should not be allowed to remain on the head and become warm, and if for any reason the cold cannot be continued, the compress should be taken off altogether.

The same applies to cold compresses on the throat. These should be placed under the chin, passing up to the ear, on either side, and held in place by a flannel covering which is fastened securely at the top of the head. Applications of this sort are more effective than those which pass around the neck.

Cold compresses are sometimes prescribed for the chest. Several layers of cotton cloth are so cut that they pass around the chest, back and front, passing under the arms and coming well up on the neck in front and behind. This "jacket" is wrung out of cool (not cold) water and laid on the chest, the whole being covered with a thick flannel or bath towel. The same rules for frequent changes apply here.

Hot compresses are most effective for the

relief of abdominal pain. A heavy towel is wrung out of hot water and applied quickly to the abdomen, and covered with a thick flannel. Great care must be used not to burn the skin. At the same time, the application should be as hot as can be borne, and is much more effective than a hot water bag.

BATHS.

Hot Foot Bath: It is sometimes desirable to place the child's feet in a hot foot bath. A small flat bottomed tub is used and is placed under the bed clothes; the child's feet are immersed up to the ankles, the child lying on its back. A teaspoonful of dry mustard may be added to this bath if desired.

Temperature Baths: Sponge baths are frequently ordered for children where there is high fever. It is best to use one part of alcohol to six parts of water. Sponge rapidly over the part, for example, one limb, and then either dry with a soft towel without friction or allow the limb to remain exposed while the water evaporates. Evaporation may be hastened by gentle fanning. The limb is then

covered and the process repeated with the other limbs, the back, the chest, exposing only one part at a time. Such baths should be given between blankets. Unless specially ordered the water should never be colder than 70°.

Cleansing Baths: These should be given in the same way except that warm water and castile soap is used. This may be followed by a rapid sponging with alcohol and cool water if desired.

Baths should never be given in diseases where there is a skin eruption, except on the advice of a physician.

DISEASES OF THE ALIMENTARY CANAL.

SORE MOUTH (*Sprue, Stomatitis, etc.*): In a large majority of cases, sore mouth is caused by a lack of cleanliness in the care of the bottle or the nipple, or by too vigorous cleansing of the infant's mouth. The disease is characterized by small white spots on the child's tongue, or on the inside of the cheeks and lips. These spots sometimes bleed. They

are painful and if neglected go on to ulceration. If taken at the start, they can usually be cured by hygienic measures alone. Scrupulous care in cleansing the bottles and nipples as previously directed (see page 72) is necessary. The nipples must be changed if too large or too hard, and after each feeding the mouth must be rinsed with warm water, using a soft cloth, and not the finger, for the purpose. The disease is more likely to be present in poorly nourished infants. It may be prevented by the measures mentioned and by keeping the infant in good physical condition.

SORE THROAT (*Tonsillitis*, *Quinsy*): Tonsillitis is of frequent occurrence in childhood. It sometimes follows a bad cold, or more often is the result of exposure in damp weather or when there is melting snow. Attacks of tonsillitis are usually accompanied by high fever (103° – 104°), restlessness, sometimes vomiting, and soreness of the throat internally. There is tenderness when pressure is made over the tonsils, and when the throat is examined the tonsils appear large, red and inflamed, and sometimes with white dots. It is always difficult to distinguish between

simple tonsillitis and the onset of diphtheria. In such cases it is wise to make a bacterial culture from the throat. If the case is one of true diphtheria, the child's life may depend upon early diagnosis. Scarlet fever in its onset is also very similar to simple tonsillitis. In all cases of illness where the cause is not perfectly clear, the throat should be carefully examined.

Treatment: If the case is one of simple tonsillitis, the child should be kept in bed and only milk given. Cold compresses should be applied to the throat externally, as above directed. The throat may be rinsed with hot salt solution ($\frac{1}{2}$ teaspoonful of salt to a glass of water), but not oftener than three times a day, and gargling should not be allowed. Cool applications may be used for the head, and cool sponging at night will relieve the restlessness and fever.

Aconite should be given, a teaspoonful every half hour, at the first indication of the illness, even before the throat symptoms become localized.

Belladonna should be given in place of *Aconite* as soon as the throat symptoms develop.

The tendency in tonsillitis is towards the formation of abscesses. These can often be prevented by the proper administration of remedies. Tonsillitis is a communicable disease, and other children in the family should be kept away from the patient. Adults should not kiss the child or come in intimate contact.

Repeated attacks of tonsillitis are sometimes due to enlarged tonsils and a weakened constitutional condition of the child. Such children require persistent and careful treatment. The operation for the removal of the tonsils is to be advised only when all other means have failed, and the tonsils are so large that they interfere with the act of swallowing. In a large majority of cases, careful constitutional treatment will prevent the necessity of tonsillotomy.

DENTITION (*Teething*): The growth of the teeth is a physiological process dependent largely upon the nourishment which the child receives. When the teeth are delayed in appearing, there is something wrong with the dietary or constitution. Oftentimes the teeth will be cut by the baby with very little discomfort. There is no definite rule, and this

trouble is quite as likely to come with later teeth as with the first.

In general, the symptoms of teething are somewhat as follows. The baby has a high temperature (103° – 104°), the face is hot and flushed, it is restless and wants to be walked with and carried, and cries in a peculiar whining way from pain. Oftentimes the pain is reflex and affects the ear, in which case the cry is much more vigorous, like the crying in colic. The gums become sore and inflamed and the troublesome tooth will often be seen under the surface of the mucous membrane. The child is especially likely at this time to have digestive disturbances, such as vomiting of food and diarrhoea with green stools containing undigested food. There is usually marked loss of weight while the tooth is being cut, but this is rapidly recovered later.

Treatment: As dentition is a natural process, we must direct our efforts towards making the infant as comfortable as possible during this period. In order to prevent indigestion, the food should be diluted one-half, or if necessary, only barley water should be given for 24 hours.

The infant should be kept as quiet as pos-

sible. This period is not one for the exercise of discipline, and if the baby is more quiet lying in the nurse's arms, it should be allowed to remain. Cool water may be given from a teaspoon frequently. In case there is earache, the affected side of the head may rest upon a hot water bag or a hot salt bag. The gums should not be rubbed and the finger should not be placed in the mouth at all. The custom of feeling the child's gums for the teeth not only adds to its discomfort, but frequently is the means of introducing disease germs to the sensitive membranes. If the child is held in the arms with the head slightly lowered, it is usually easy to see the gums, which will give all the information necessary. Teething rings and "pacifiers" are disease carriers and should never be allowed.

It should be remembered that diseases frequently occur at the time of teething, and their symptoms are disguised by the teething symptoms. Cough at this time should always be regarded as suspicious, and frequently bronchitis and pneumonia are allowed to exist without being suspected, because their symptoms are laid to teething.

The average length of time for cutting a tooth is from one to two days, and symptoms lasting a longer time may arise from some other cause.

Chamomilla may be given when the child is cross and irritable, desires to be carried in the nurse's arms, and especially if there is diarrhoea with greenish yellow stools.

Belladonna will be more useful if the head is hot, cheeks brightly flushed, if the child wakes suddenly and frequently from its sleep, and if the pain causes violent spasmodic crying. It should be given in cases in which the ear is affected.

Calcarea carb. may be given night and morning for those cases in which dentition is delayed.

It should be remembered that in addition to the danger of the existence of other diseases during the period of dentition, there is also danger that the ear may become infected, and suppuration with rupture of the ear drum follow. Whenever the ear symptoms are not relieved in a few hours, a physician should make a careful examination. Many cases of deafness in adults are due to neglect of the

parents or physician during this period of teething.

ACUTE INDIGESTION: Acute indigestion is caused by improper food. It may be from milk which has become tainted or soured, and it may be from too rich milk, or in older children from other unsuitable food. There is a rapid rise of temperature, with the usual symptoms accompanying fever, and vomiting of food. There is often acute pain with the attack. Sometimes not even water will be retained. In such cases it should be remembered that the stomach is in an extremely irritable condition and requires absolute rest. It is best to stop all food for 12 to 24 hours. During this period of fasting, water may be given very cautiously, half a teaspoonful at a time, and if this is retained, toast water may be given in the same way. If the stomach is able to retain this and the fever has dropped, barley water may be given, also in very small quantities and frequently (rather than the usual amount at the usual nursing periods). If this is well retained for 24 hours, the usual milk formula may be given diluted one-half with water. It may be gradually strengthened

from day to day until the required strength is reached. During this period of returning to the normal feeding, the infant must be watched very carefully, and at the first indication of a return of the trouble the food must be stopped entirely or diluted.

Vigorous dietetic treatment of this sort will usually nip in the bud an attack of indigestion, and perhaps prevent it from becoming serious intestinal trouble.

In older children where solid food is the cause of the disease it is sufficient to stop all food for 12 hours, and then give plain milk or gruel in small quantities until the stomach is normal.

Treatment: *Ipecac* should be given, in water, a teaspoonful after each vomiting attack until the vomiting has ceased. It should be given in the same way if there is nausea with ineffectual attempts at vomiting.

Arsenicum, a teaspoonful every hour, should be given in place of *Ipecac* if the former does not relieve, if there is high fever, restlessness, hot skin, great thirst, with vomiting even of small quantities of water.

It must be remembered that many serious diseases resemble in their onset acute indiges-

tion. Where the temperature remains high for 24 hours, or if there is no history of improper food, we must suspect that the symptoms are caused by other than gastric disturbances. Meningitis, scarlet fever, diphtheria, and pneumonia, as well as other diseases, simulate very closely acute indigestion in the early stages, and it is wise to take no chances as to the diagnosis.

DIARRHŒA (*Enteritis, Summer Complaint, etc.*): This condition is sometimes the result of neglected indigestion which has caused inflammation of the mucous membrane of the stomach, which in turn has extended into the intestines. In other cases, the stomach succeeds in passing the poisonous food into the intestine and the first indications of trouble are loose watery movements.

These movements may consist simply of thin fecal matter; they may contain curds or undigested food, or, in the severer forms, mucus, pus and blood may be found. They are yellow, brown, or green, and are thin and watery. In mild attacks there may be from 2 to 4 movements daily, while in the severe forms, stools may be as frequent as every 15 minutes.

This condition is a very serious one, and should never be neglected. Intestinal diseases are the cause of more deaths in infants than any other disease. It is especially serious during the hot weather, not only on account of the infant's lowered resistance, but also because of the contamination of the milk supply at that time.

The movements are usually accompanied by much pain, and if the stomach is involved there will also be vomiting. There is usually fever, although not as high as in acute indigestion (100° – 102°). If the condition is allowed to continue, there is rapid emaciation, pallor of the skin, extreme weakness, all of which are due to the loss of fluids from the body. In weak babies, death may result from such attacks in 2 or 3 days.

Dietetic Treatment: The dietetic treatment is the same as that given above for acute indigestion, except that even more caution must be used in returning to the normal food. In cases where there is a suspicion as to the purity of the milk supply, the milk should be boiled before being used. Older children may be fed on browned flour or arrowroot gruel or

meat broths until the symptoms have disappeared.

The condition is a serious one—the younger the child, the more serious. All the resources of the physician will be taxed, and no attempt at home treatment should be made except in rare emergencies when a physician cannot be secured. It is sometimes necessary to wash out the intestine as previously directed, and hot salt injections may be necessary to replace the loss of fluids. These measures are, however, rarely necessary if the case is treated carefully and intelligently at the first signs of the trouble.

Remedies: *Cuprum* should be given, a teaspoonful after each movement of the bowels, if there is sharp pain, if the stools are greenish and contain undigested food. If given early it will prevent a serious attack.

Arsenicum should be given in the same way if the stools are liquid and brownish or yellow, if they irritate the skin around the buttocks, and if there is much thirst for small quantities of water.

Nursing: In nursing a case of diarrhoea special attention should be paid to the quality

and quantity of the air supply. While the child must not be allowed to take cold, yet if the disease occurs in the summer, as it frequently does, it will be well to have the bed by the window or if possible out of doors. The greatest cleanliness must be observed. The buttocks and thighs must be kept clean without the use of too much soap or rubbing. Dusting powder should be used sparingly in this region. It must be remembered that the stools are loaded with bacteria and are highly contagious. For this reason, the soiled napkins, if they are not burned, must be boiled or otherwise disinfected, and the nurse's hands must be scrubbed in soap and water and alcohol after touching the napkins.

CONSTIPATION: Constipation in children is usually due to improper feeding. In addition to the general measures given in the section on feeding, the following remedies may be mentioned:

Nux vomica when there is desire for movement which is ineffectual.

Bryonia when the stools are small, hard, dark in color as if burnt.

Calcarea carb. when the stools are light

colored, in fat children in whom the development of the bony structures is delayed.

These remedies are to be administered 8 pellets in half a glass of cold water before each meal and before retiring. In infants one pellet may be dissolved in a teaspoonful of water and given night and morning.

These remedies are not cathartics and must be given for several days to obtain results. After the normal movements are resumed the remedy should be gradually discontinued. Too much cannot be said against the indiscriminate use of cathartics by mothers and nurses. When diet and exercise are not sufficient to cure the case, home treatment should cease. Many an adult is a slave to cathartics owing to the ignorance or carelessness in the use of these drugs during childhood. Pure olive oil only, a teaspoonful to a tablespoonful, may be used without harm.

Immediate relief, when necessary, can always be obtained by the use of enemas, given as previously directed, or by the insertion in the rectum of a gluten suppository.

INTESTINAL PARASITES (Worms).

The intestinal canal of children is very frequently infected with parasites. They are usually pin worms, round worms or tape worms. We can only be certain of their presence when they are seen in the stool. The general symptoms indicating worms are grinding of the teeth at night, picking the nose and lips, flushing of the face, especially at night, with fever, and difficulties of digestion usually with constipation. Bed wetting is common and milky colored urine is sometimes seen. There is often intense itching of the region around the anus. These symptoms, however, may arise from other causes and should not be attributed to the presence of worms unless they are seen in the stools.

Treatment: As pin worms exist mostly in the large intestine, they can usually be relieved by the use of enemas. Warm salt enemas (a teaspoonful of salt to a pint of water) may be used at night before going to bed. These enemas cause discomfort to some children, and in their place may be used 1 or

2 ounces of olive oil which is retained about 5 minutes, in the rectum, and then followed by a warm soap suds enema. Where there is itching and much discomfort, vaseline may be used about the anus, or in extreme cases, sweet oil may be injected in small quantities ($\frac{1}{2}$ to 1 ounce) once or twice a day.

Round worms which resemble common earth worms, and tape worms which appear in flat white sections from $\frac{1}{4}$ of an inch to $1\frac{1}{2}$ inches in length are more difficult to remove, and require the attention of a physician.

CONTAGIOUS DISEASES.

General Directions: The patient must be isolated in a light airy room, from which all members of the family are excluded except those nursing the patient. The nurses must not come in contact with any other members of the family except when off duty, and then only with the adults. Great care must be used to exclude domestic pets from the room. The temperature of the room should be about 68°.

All the dishes used in the sick room by the

patient and the nurse must be kept exclusively for them, and must be sterilized before being used by anyone else.

Before going off duty, the nurse must change all her garments, including her shoes, and must scrub her hands in hot water and soap and sterilize them in alcohol. Her hair must also be sterilized in alcohol. A basin of alcohol must be kept near the bed and the hands rinsed after contact with the patient. Thermometers must be sterilized in alcohol.

All the bed linens and the patient's garments must be boiled separately in soap and water for half an hour before going into the general wash.

Chloride of lime may be used for disinfecting the bed pan, syringes, and secretions and excretions of the patient.

At the end of the period of isolation the patient must be given a disinfecting bath, with green soap and hot water, to be followed by sponging with alcohol. The clothing which has been used during the period of isolation must be left behind for disinfection, and fresh clothing put on after the disinfecting bath.

Board of Health Rules: The New York Board of Health requires that scarlet fever and measles be isolated until peeling is complete, and diphtheria until the throat is free from germs. This usually means a period of from three to six weeks.

They also require that the rooms used by the patient be disinfected under their direction. In private houses such disinfection may be done by private companies, but in all cases the bedding must be removed by the board of health and sterilized by them.

Physicians and citizens are required to report contagious diseases to the Board of Health, and inspectors visit such cases at regular intervals. The inspectors are not allowed to examine the patients except at the termination of the disease, in order to learn whether peeling is complete. They are, however, required to inspect the premises to see that isolation is properly carried out.

In case there are other children in the family, they must be excluded from school as soon as a diagnosis is established.

The following diseases are considered by the Board of Health as contagious and must be reported :

Scarlet fever, diphtheria, measles, chicken pox, German measles, whooping cough, cerebro-spinal meningitis.

Tuberculosis, typhoid fever and malaria must also be reported to the Department of Communicable Diseases.

DIPHTHERIA.

Diphtheria is an acute infectious disease caused by a specific germ known as the Klebs-Loeffler bacillus.

Its onset is usually sudden. There is vomiting, moderately high temperature (101° – 102°), rapid weak pulse, pain in the back and limbs, and chilliness. The breathing is rough, there is sometimes a slight hacking cough, an offensive odor to the breath, and enlargement of the glands of the neck. There may be slight pain on swallowing, and after 12 or 24 hours a white or greyish membrane appears in the throat, usually upon the tonsils. This membrane spreads upward, partially covering the soft palate and the posterior part of the roof of the mouth.

During the early stages, the disease cannot

be distinguished from tonsillitis and other infectious diseases except by an examination of a culture from the throat. Such a culture should be made in all cases of sore throat.

The disease progresses very rapidly and in two or three days the throat may be so filled up with the membrane that breathing is difficult.

The disease sometimes assumes other forms. The membrane may be located in the nose, in which case it is likely to be mistaken for nasal catarrh with a purulent discharge.

The laryngeal form of diphtheria, in which the membrane is in the larynx, was formerly known as membranous (or true) croup. In this form there is present a peculiar cough, characterized by the absence of voice sound. It is simply a forcible expulsion of air without the usual sound which accompanies a cough. Laryngeal diphtheria is a very dangerous form of the disease, and frequently, in order to save the child's life, it is necessary to place a tube in the larynx, or in extreme cases to perform the operation known as tracheotomy. False croup (so called) may be distinguished from this diphtheritic or true croup by the

fact that the cough instead of lacking voice sound is loud, deep and hollow. In fact, to the untrained ear, the sound of the cough in false croup is more alarming than that in true croup.

All forms of diphtheria affect the whole system, and the after effects are fully as important as the disease itself.

There is great danger of paralysis of the heart muscles, and consequently sudden death. Children who are allowed to sit up in bed, or be out of bed before the heart has regained its normal tone, frequently drop dead without the slightest warning. There are also occasional paralyses of other muscles, notably the muscles of the throat, the eye muscles, and the muscles of the legs.

Another frequent complication is acute nephritis (Bright's disease of the kidneys), which, if neglected, becomes chronic and makes the child an invalid for years.

Treatment and Nursing: Cases of diphtheria require the most skillful treatment and nursing. The patient must be kept in bed, and not even allowed to raise the head from the pillow until all danger of heart failure has passed.

Milk may be given freely, as well as cool water. No other food, however, should be given until convalescence is well established.

Local applications should not be used except when advised by a physician, nor should there be any attempt at home medication. The first and most important point is to establish a diagnosis by means of a bacterial culture. When this point is settled, it remains for the physician to decide whether or not he will use Antitoxin. This is a question which must be largely decided by the individual case, but whatever views may be held as to the occasionally harmful after-effects of Antitoxin there can no longer be any question as to the fact that its use has very greatly reduced the death rate in diphtheria.

If there are other children in the family, their throats must be examined daily for signs of the disease, and bacterial cultures must be made at frequent intervals.

Repeated attacks of diphtheria in the same individual are common.

SCARLET FEVER (Scarlatina).

Scarlet fever is an acute infectious disease, the specific cause of which has not yet been determined. It resembles tonsillitis and diphtheria in its onset. The temperature is high (104° – $104\frac{1}{2}^{\circ}$). There is nearly always vomiting at first, and the pulse is rapid. The child feels very sick and complains of a sore throat, and the skin is hot and dry. The throat when examined appears to be bright red, and often fine pin-point spots, slightly darker than the surrounding mucous membrane, may be detected. These spots are the same as those which later appear on the surface of the skin.

The skin eruption is usually seen in 48 hours after the onset of the disease. It appears first on the face and spreads rapidly over the whole body. The rash, however, sometimes disappears so rapidly from the face that it will not be detected, and it is always wise to examine the body carefully. The rash consists of bright red dots on the skin, so close together that they are scarcely distinguishable, and a few feet away the skin presents an appearance of bright redness. The child is

often described as looking like a "boiled lobster." The face presents a characteristic appearance which is unmistakable. The lips and skin around the mouth are free from eruption. In consequence, although the rest of the face appears brightly flushed, the region around the mouth seems abnormally pale.

The tongue is thickly coated, but by the time the eruption appears, the upper layers of this coating become rubbed off, and the redness of the mucous membrane shows through in spots. This is often described as a strawberry tongue.

The acute stage of the disease lasts from two days to a week. The rash fades rapidly in the same order in which it came, disappearing from the face first, and last from the feet. It is followed by a long period of desquamation (peeling) in which the outer layer of the skin comes off in fine or large flakes. The skin on the palms and soles, on account of its thickness, is the last to peel.

The disease is contagious from the onset until desquamation is complete. The small particles of skin are frequent carriers of the disease and great care must be used to prevent infection from them.

The after effects of scarlet fever are of great importance. Frequently it is accompanied or followed by acute nephritis, and heart complications are common. The eyes and ears often suffer, sometimes to the extent of total blindness or deafness.

Nursing: In general, the same care must be used in nursing scarlet fever as in other acute infectious diseases. Cool water and milk may be given freely. If there is troublesome itching of the skin it may be relieved by anointing the body with white vaseline or any other simple oil. The skin should not be bathed unless under a physician's direction, but cool applications may be used on the head if there is high fever, heat and restlessness.

The mouth and throat may be carefully cleansed with hot salt solution ($\frac{1}{2}$ teaspoonful of salt to a glass of water). During the period of peeling, the body should also be anointed, not only to hasten this process, but to prevent the spreading of the particles of skin. Soap and water and a scrub brush may be used on the hands and feet during the latter part of the convalescence.

Belladonna, a teaspoonful every half hour,

may be administered if there is delay in procuring the services of a physician. The same remedy may be given to other children in the family, 8 pellets night and morning, as a preventive measure. The disease is a serious one, however, and no time should be lost in securing a physician. More than one attack of scarlet fever in the same individual is very unusual.

MEASLES (Rubeola).

The onset of measles is decidedly different from that of the diseases just described. The first symptoms to be noticed are a discharge from the nose, usually attributed to a cold, and soreness and inflammation of the eyes. There is a slight rise of temperature (101° – 102°), and a dry, troublesome cough. Headache is sometimes present, but rarely vomiting. The child is almost invariably cross and irritable, and cries at the slightest provocation. During this time the throat, if examined, appears dark red and congested. Sometimes small white dots with a dark bluish base (Koplik's spots) may be detected on the inside

of the cheeks if examination is made for them in the daylight.

About four days after the first symptoms are noted the skin eruption appears. It is apt to be seen first upon the chest and spreads rapidly over the whole body, the temperature increasing until the rash is fully developed. The rash is dark red, almost coppery in appearance, and the spots appear to be slightly elevated on the surface of the skin. These spots run together, but there are frequent areas of healthy skin, so that the general appearance is mottled rather than the diffused redness of scarlet fever. The eruption becomes darker, almost purplish, and fades slowly. There is usually itching of the skin.

The cough and nasal symptoms often increase and cause much discomfort. The eyes remain sore and severe inflammation of the conjunctiva may result. The eruption remains for two or three days, and the temperature falls rapidly as the eruption fades. During the acute stage of the disease there is frequently stomach or intestinal disturbance, usually in the form of diarrhoea. After the eruption fades, the skin peels, but the flakes of skin are

very fine and will not be detected unless careful examination is made.

The eyes and ears are frequently infected in measles, and serious inflammation of these organs is to be expected. The most frequent complications, however, are bronchitis and pneumonia. Cough and temperature existing after the eruption has disappeared should be regarded with suspicion. The weakened lung tissue also provides fertile soil for the tubercle bacilli, and many cases of pulmonary tuberculosis are traceable to an attack of measles. The lowered vitality of the child after measles enables the tubercle bacilli to obtain a strong foothold.

It is not impossible for an individual to have more than one attack of measles, but oftentimes one of these attacks is unrecognized German measles.

Nursing: The child should be kept in bed during the attack, and care should be taken to prevent a bright light from striking the eyes. It is not necessary, however, to exclude fresh air, so long as the ordinary precautions against taking cold are observed, nor should the child be kept uncomfortably warm, as is so often done.

The eyes should be cleansed of all discharge with warm water, and the nasal passages kept as free as possible. The skin may be anointed with olive oil to prevent itching, or if this is not effective, the skin may be dusted with powder.

The child may be given plenty of cool water to drink, but a liquid diet should be insisted upon.

Bryonia may be given, a teaspoonful every hour, during the first stages, especially if the cough is dry, hard and troublesome, if there is much headache and the eruption is slow in appearing.

Chamomilla should be administered in the same way if the mental symptoms predominate, if there is much irritability and fretfulness.

Arsenicum is indicated if there is gastric irritability with loose movements, high fever, and excessive thirst.

It is of the utmost importance to allow a long period of convalescence after measles. Many children are allowed to go out before they are entirely well and frequently contract diseases of the lungs as a result. Perhaps

there is no other disease of childhood which leaves the patient's vitality in such a lowered condition as measles, and for this reason a long rest, preferably in the country, should follow an attack. Frequent examination of the lungs should be made, and more than ordinary care should be used to prevent taking cold.

GERMAN MEASLES (Rötheln, Rubella).

German measles is a disease which resembles very closely true measles, but is usually much milder in character.

Its onset is more often characterized by sore throat than is true measles, and there is usually enlargement of the glands of the neck.

The eruption is somewhat like that of scarlet fever, but the red spots appear first on the chest and face and spread rapidly over the body, and are larger than the pin point spots of scarlet fever. The eruption disappears more quickly than in true measles, and the disease is not as likely to be accompanied by the severe cough which occurs in measles.

The temperature is rarely above 101° , and the disease has no serious after effects. It is chiefly of interest on account of its resemblance to true measles, and it is usually difficult to distinguish between the two.

Nursing: The management and treatment of German measles is the same as that for a mild attack of ordinary measles.

MUMPS (Epidemic Parotitis).

Mumps is an infectious disease characterized by inflammation of the parotid glands. These glands secrete saliva and are located on either side of the neck under the jaw. The germ causing this disease has not yet been discovered.

At the beginning there is usually slight chilliness, headache and slight rise of temperature (99° – 100°), with stiffness, and soreness of the neck on one or both sides. There is also tenderness, and pain in this region when sour things are tasted. The neck becomes swollen; it is smooth and hard, and tender to the touch. The swelling extends backwards so that the ear occupies about the center of

the enlarged part. Both sides may be affected at the same time, or the disease may come on one side and later extend to the other. Its duration is from four to ten days.

Nursing: The disease is not a serious one if uncomplicated, but great care should be taken to prevent the child from taking cold, or undue exercise. During the acute stage, the child should be kept in bed and dry heat applied freely to the neck.

As it is difficult for the child to swallow, it is best to take only a liquid diet, and avoid especially articles which are sour or sweet.

Hot olive oil may be rubbed gently on the neck, night and morning, if this rubbing does not cause discomfort. Such rubbing will hasten convalescence when the acute stage is over.

Infection in mumps is probably carried by the saliva, and great care should be taken to avoid kissing the child or coming in contact with the saliva. The patient should be isolated the same as in other contagious diseases.

The only serious complication is orchitis (inflammation of the testicle), which sometimes occurs in males, or mastitis (inflamma-

tion of the breasts) in females. It is best avoided by care as to taking cold, and by complete rest for the patient until the parotid glands become normal.

Aconite should be given, a teaspoonful every hour, for the general symptoms which arise when the glands become inflamed.

Belladonna is indicated in the later stages where the swelling is hard and tender to the touch.

CHICKEN-POX (Varicella).

Chicken-pox is a mild infectious disease, beginning with a slight rise in temperature (99° – 100°), loss of appetite, and general languor.

The eruption appears first on the back and consists of small red spots. These spots may be widely separated. There may be only four or five on the whole back. Small water blisters soon form on the top of these red spots and in a day or two these blisters become black and dry up. These spots are found on other parts of the body, but generally they are widely scattered.

The disease runs its course in three days to a week, and generally the child is not ill enough to remain in bed.

Chicken-pox has no serious complications or after effects; very severe cases may resemble small-pox somewhat, but such cases are rare.

Nursing: The child should be kept quiet and fed on a light diet. Great care should be taken to prevent rubbing or scratching of the eruption. The skin may be kept well covered with vaseline, and where there are large spots, they may be protected with a bandage.

Aconite may be given, a teaspoonful every hour in the early stages of the disease, but no other medication is necessary unless special symptoms arise for it.

WHOOPIING COUGH (Pertussis).

Whooping cough is an infectious disease, characterized by spasmodic attacks of coughing. During these coughing attacks the forcible drawing in of the breath causes a crowing noise, known as the "whoop."

Before the whoop is present there is usually a period extending from two or three days to a

week when the cough is hard, dry and irritating. It is a short, sharp cough, coming very frequently, and is usually worse at night than in the day time. It resembles very closely the cough in acute bronchitis, but if the lungs are examined the lesions of bronchitis are not found.

After a longer or shorter period the true spasmodic character of the cough becomes noticeable. The child may cough for five or ten minutes at a time, with frequent whooping, and usually the cough ends in vomiting of thick, stringy mucus.

During these spasmodic attacks, the child becomes blue or purple in the face, rushes for the nurse's skirts or some article of furniture to which it holds, or an older child leans forward with the hands on the knees. The attack seems most alarming, and to those who are not familiar with the disease, it seems as if the child would choke to death. When the attack is over, however, the child goes about its play as unconcerned as if nothing had happened.

This stage usually lasts three or four weeks, and is followed by a long period in which

there is simply a loose, rattling, catarrhal cough, with only rarely the spasmodic or whooping character about it. The whole disease may extend over a period of two or three months.

This is a disease which requires careful medical attention, principally on account of the danger of pneumonia, bronchitis and tuberculosis. All of the child's vitality is needed to overcome the disease and it falls an easy prey to other infections.

If it is possible to keep the child in the open air without coming in contact with other children, it is always desirable to do so. Cases of whooping cough do best at the seashore. If children must be kept in the house, the windows must be kept open as much as possible, and during the spasm of coughing the child should be taken to the window.

The numerous patent medicines, nostrums and home remedies which are given to relieve the spasms are of no value, and they do harm in irritating the already sensitive stomach of the child. If the child holds its face over a bowl of hot water and inhales the steam, it sometimes gives temporary relief. The in-

halation of medicated steam or vapor should never be resorted to except by a physician's direction. Serious cases of poisoning are sometimes noted as a result of these inhalations on account of the presence of Carbolic acid in them.

A firm bandage around the abdomen, or better still, a whooping cough belt, which is sold at all large places where surgical supplies are kept, will afford more relief than any other single measure.

The matter of nourishment is an important one, as the child is likely to have a spasm of coughing and vomiting after eating, and considerable care is necessary in giving food. Milk should form the principal article of diet, and this should be given in small quantities, very slowly from a teaspoon. It is best always to give the nourishment immediately after an attack of coughing, as this will allow the stomach to absorb a portion, at least, of the food before another attack of the coughing comes on. Beef juice, beef broth, eggs and other nourishing food should be given freely. It is of the utmost importance to sustain the child's strength during this disease.

During the spasms the child should be helped in every way possible. Changing the position, holding the child with the head forward, pushing the lower jaw forward or providing something for the child to lean against will often help. The child should never be left alone. At times it may be necessary to insert the finger covered with a soft cloth into the child's throat to remove the mucus. These spasms, if severe, seriously strain the child's heart, and stimulation under a physician's direction may be necessary.

Bryonia: A teaspoonful every one to two hours, will quiet the cough during the early stages before the spasmodic character is apparent.

Ipecac: A teaspoonful after each spasm, should be given during the second stage when there is much vomiting.

Cuprum may be used in the same way if the spasms are violent, the patient becomes blue in the face, and vomiting is not so marked.

One or the other of these remedies will usually shorten the attack and relieve the spasms.

GENERAL DISEASES.

COLDS.

Colds may be due to exposure, to indiscretion in diet or to infection. Usually one or the other of these causes is combined with fatigue and consequent lowered resistive power. For example, the child after some unusual exercise, perhaps after playing too hard, is exposed to a draught which ordinarily would not be noticed. The result is a cold. The same thing occurs when a tired or weakened child is exposed to the infection of some other individual who has a contagious cold. The reason why some children take cold more easily than others is because they lack the vitality which is necessary to overcome disease.

Considering these causes, it will be evident that colds are more or less preventable, and the question resolves itself into maintaining a high standard of health in the individual child. This can only be accomplished by careful attention to all the details of diet, exercise, bathing and general hygiene. Chil-

dren who are subject to colds should also be carefully examined for abnormalities of the nose and throat, and if present they should be corrected.

Dress: The child should not be dressed too warmly. The lightest weight woolen garments should be worn next to the skin, and the outer garments changed according to the weather. Great care must be taken not to keep the child too warm, as this will result in perspiration and consequent sudden cooling of the surface of the body.

Bathing: The child must also be accustomed to cool, and later, cold bathing. At the start these baths are best given with bathing mits made of coarse toweling. By this means the body is sponged over with cool water and at the same time brisk friction made on the skin. With sensitive children great care should be used not to have the water too cold at the start. Lukewarm water may be used, gradually lowering the temperature. Neither is it advisable to begin with shower or tub baths. These may come later and depend entirely upon the reaction and the child's comfort. With sensitive children it may be

necessary at the start to sponge only the chest and throat. These baths are best given in the morning on rising, and warm, cleansing baths should always be followed by cool sponging. After once beginning a course of cool bathing, it should be kept up, and the daily bath should never be omitted. It is quite possible to catch a cold by neglecting the morning bath after becoming accustomed to it. Children should not be allowed to over-eat, especially at night or when tired.

Treatment: To successfully treat a cold, it is necessary to use vigorous measures from the start. It has been said that neglected colds are the cause of more than half the ailments of mankind. There is no doubt that if mothers could be persuaded to put their children to bed at the first signs of a cold, and keep them there until cured, many of the serious results of colds would be prevented. It seems almost impossible to do this in the average case because of the fancied discomfort to the child. If bed treatment is impossible, the child should at least be kept in one room and isolated from the rest of the children of the family, and an effort made to regulate

carefully the temperature of the room (68°), the exercise and the diet of the child. Milk, milk toast, broths, gruels, and eggs may be given to older children. The child should not be allowed to run about the room or take any exercise which will cause perspiration. If cool bathing has been practiced, it should be kept up during the cold. The child should be persuaded to drink as much water as possible between meals, and the bowels should be kept open by means of diet, or, if necessary, enemas.

Soft cloths should be used for blowing the nose, and these should be burned. The child should not be allowed to blow the nose too hard, as this frequently causes the ear to become involved. Home treatment, if begun at the first signs of a cold, will often prevent it from going to the catarrhal stage.

Aconite should be given, a teaspoonful every half hour, immediately after exposure, especially if there is dry skin, fullness in the nose and chilliness. This will oftentimes prevent the development of a cold.

Belladonna should be given, a teaspoonful every hour, when the face is flushed and hot,

with throbbing headache. The voice is hoarse and the cold seems to be localizing in the throat with rawness and pain on swallowing.

Arsenicum may be given hourly if there is much sneezing with a thin watery discharge from the nose which excoriates the nostrils. The nose feels hot; there is much thirst, restlessness and all symptoms are aggravated at night.

Bryonia will be most effective where the cold is accompanied by severe, hard, dry, hacking cough. There is headache, pain in the limbs and oftentimes a darkly coated tongue. The child lies quietly and does not like to be disturbed.

Nux vomica is called for if the cold is due to indiscretion in diet. The nostrils are stopped up, or one nostril is free and the other closed. The child is apt to be constipated and all symptoms are worse in the morning.

Calcarea carb., a tablet night and morning, should be given to children who take cold easily, especially if they are fat, pale, with flabby muscles, and perspire easily on the slightest exercise.

BRONCHITIS.

The most frequent result of neglected colds is bronchitis. In bronchitis there is a rise of temperature (99° – 102°), headache, and at first a hard, dry cough caused by inflammation of the bronchial tubes. If this inflammation is in the larger tubes the disease is less severe, but when the smaller bronchial tubes become involved, it is very difficult to distinguish between bronchitis and the bronchial form of pneumonia.

Bronchitis is a disease which needs careful medical attention, and in all cases where there is cough and even slight rise of temperature, a careful and thorough physical examination should be made.

PNEUMONIA.

Pneumonia may exist either as broncho-pneumonia, in which small scattered areas of lung tissue are involved, or as lobar-pneumonia when a whole lobe of the lung is affected. The two forms are distinguished only by physical examination.

At its onset pneumonia is sometimes disguised by other symptoms. It may come on more or less insidiously from a cold, or during the course of one of the acute infectious diseases. When it is uncomplicated, there is apt to be, at the beginning, vomiting with high temperature (103° – 104°), very rapid respiration and rapid pulse. The breathing is shallow and at the end of inspiration a "catch" is noticed. Frequently there is no cough at the beginning of the disease, and unless careful physical examination is made there may be no suspicion of inflammation of the lungs. Usually, however, the cough during the early stages is hard, dry and painful.

Treatment: Pneumonia may run a longer or shorter course, but it is a disease which taxes every resource of the physician, and no time should be lost in securing medical assistance. More than any other disease, except perhaps diphtheria, its success in treatment depends upon early diagnosis.

Upon the first suspicion of the illness, the child should be put to bed, and kept upon a liquid diet.

Aconite should be given, a teaspoonful

every hour, if there is high fever, hot skin, with restlessness and thirst.

If the lungs are carefully examined at this stage of the disease and a diagnosis made, it may be possible to prevent a serious attack. Home treatment, without the advice of a physician, should not be attempted.

Mothers should remember that children are likely to complain of pain in the stomach rather than in the chest in pneumonia and other diseases of the lungs.

SPASMODIC CROUP (False croup).

Croup usually develops suddenly in the night with symptoms which seem very alarming. The child awakens suddenly with a spasm of coughing, hard, hollow and prolonged. There is difficulty in breathing, the face becomes purple or red and the child gasps and struggles for air. During the day there is only a slight loose cough and the child seems as well as usual, or there may be slight nasal catarrh.

The condition is not ordinarily a serious one. Nearly always the spasm is short and

by the time the physician arrives the child is sleeping quietly.

Treatment: Cold compresses should be applied to the neck and a few swallows of hot water taken internally.

Aconite, 8 pellets in half a glass of water, a teaspoonful every fifteen minutes, will usually relieve the spasms at once.

Spongia, 4 pellets every hour, should be given during the day to prevent recurrence.

Croup is sometimes caused by adenoids or other growths in the nose and throat, and if present, they should be removed. Great care should be used to distinguish between false croup and so-called membranous croup which is a form of diphtheria.

TUBERCULOSIS.

Tuberculosis is an infectious disease caused by the tubercle bacilli. These germs may attack any part of the body, but the lungs, joints and glands are the parts most frequently attacked. The disease is very prevalent among children, although this fact is generally overlooked, not only by mothers, but also by

physicians. Its importance will be recognized when we consider that one-third of all the deaths in children's hospitals are caused by tuberculosis.

It is of the greatest importance then for mothers to be familiar, not only with the early symptoms of the disease, but also with the so-called tubercular diathesis. In order to acquire tuberculosis, two elements are necessary. First, the germ which comes from without, and second, such a condition of the system that the germs may flourish and grow. We find such a condition in pale, thin, narrow-chested children. Such children have generally suffered from improper feeding, and in consequence they are anæmic and poorly nourished. The appetite is fickle, there is great dislike for milk, eggs and other simple foods. When we find such a child losing weight, sleeping poorly, nervous and irritable, complaining of lassitude and other vague symptoms, it is high time to take steps to prevent tubercular infection. Children of this type are apt to have very light hair, the whites of the eyes are a peculiar "bluish-white," the shoulder blades project and often

there is fine hair (lanugo) on the child's back. The glands in the neck may be felt and oftentimes they increase in size, especially if the child has a cold. It is this general condition that we mean when we speak of the tubercular diathesis, and if treatment is postponed until infection has taken place, it may be too late.

Such children should be taken out of school, and if possible sent to the country, under such conditions that they can live in the open air. Their surroundings must be pleasant and they must be happy and contented. They must be taught to eat plain, simple food (milk and eggs), and this feeding must be kept up until the child is strong, healthy and vigorous and once more gaining normally in weight. The special conditions which may arise during such treatment, for example, colds, tonsillitis and cough, should receive careful medical attention. A thorough physical examination of the child should also be made at regular intervals and careful record kept of the weight.

It is easy to advise such radical treatment, but oftentimes difficult to carry it out. The results obtained, however, are worth all the trouble and expense involved and no consider-

ation should have any weight compared to the child's future health and strength. A year of early treatment of this sort will often prevent many years of illness later in life.

RICKETS (Rachitis).

Rachitis is a non-infectious constitutional disease due to improper food and insufficient supply of fresh air. It occurs ordinarily in infants. The effects of the disease are shown principally in the bones. In rickety children, the lime salts which give rigidity to the bones are lacking, and the bones are soft and flexible. When the child stands, the bones of the legs are not stiff enough to support the body, and as a result they bend, and we find either bow legs or knock knees. In the same way the breast bone may project forward, the ribs may be deformed or the bones of the skull assume unusual shapes. In such children the teeth are slow in appearing and the fontanel (opening in the skull) does not close. A large percentage of the bone deformities seen in adults is due to rickets in childhood.

Treatment: Rickets may be prevented if

babies are nursed, or if they are fed on carefully modified, unboiled cow's milk. They must also receive an abundance of fresh air. The disease is difficult to recognize in the early stages, but it should be suspected in children in whom the teeth are slow in appearing, where there is a tendency to the rapid taking on of fat with consequent flabby muscles. Such children perspire easily, especially about the head and neck, and the abdomen is likely to be prominent. When the disease is once established, careful dietetic and medical treatment must be carried out. Individual cases will require different treatment, and great care and judgment is necessary to prevent future deformities.

SCURVY (Scorbutus).

Scurvy is a constitutional disease due to imperfect nutrition. It is frequently caused by boiled milk, condensed milk, infant foods and improperly modified milk. It occurs most frequently in the first eighteen months of life. The child becomes anæmic and gastro-intestinal disturbances (diarrhoea, colic,

etc.) are present. As the disease progresses, the bones, especially at the wrists, elbows and ankles, become very sensitive, and the child cries whenever they are touched. The child lies quietly and does not wish to be moved. Later on there is marked swelling of the bones near the joints, and the gums become inflamed and congested in spots.

Treatment : The disease may be prevented by avoiding the causes mentioned above. If the disease is present, it is not only necessary to correct the diet but to add to it fresh fruit juice. The juice of one or two oranges may be given daily, diluted with one-third water. Orange juice may also be given as a preventive measure to children showing any tendency towards scurvy.

RHEUMATISM.

Rheumatism occurs in children very frequently. It may be present as rheumatic fever or more frequently the chronic type of the disease exists. This form is rarely recognized by mothers, and the pains of which the child complains are dismissed as "growing

pains." Growing pains are purely mythical, and whenever the child complains of pains in the limbs or joints, rheumatism is the probable cause.

The disease is chiefly of importance on account of its effect upon the heart. Even mild rheumatic attacks which are scarcely noticed will leave behind more or less serious heart affections which require very careful treatment. For this reason mothers should never neglect the warning which is given to them when the child complains of "growing pains."

CONVULSIONS.

Convulsions occur very frequently in infants, and from a large number of causes. Often they mark the onset of some acute disease, taking the place of the chill which occurs in older children. They are always cause for alarm and a physician should be summoned immediately. In the meantime the child should be immersed in warm water. Care should be used not to have the water too hot (not over 100° Fahrenheit), and the

infant should not remain in the bath more than two or three minutes.

Cuprum met. should be given internally, 2 pellets dissolved in a teaspoonful of water and allowed to pass slowly into the mouth.

After removing the infant from the bath, it should be well wrapped in warm blankets and not disturbed unless another convulsion occurs, when the bath may again be used. No other treatment should be given excepting under the direction of a physician.

BAD HABITS.

Thumb Sucking: Sucking the thumb, fingers or fist in young babies is frequently a sign of hunger. Older children, however, sometimes acquire the habit, especially at the age of teething. The habit is an injurious one because if practiced for any length of time, it causes deformities of the upper jaw and mouth breathing. Many adults who are made conspicuous by prominent front teeth can trace the trouble to thumb sucking in infancy.

The habit may be corrected by repeatedly

removing the fingers from the mouth when the child sucks them, until finally the idea of what is wanted becomes fixed in the child's mind. It is often wise to sew across the sleeve of the night garment below the hand, or the hollow aluminum balls which are made to go over the hands may be used.* In extreme cases it may be necessary to bandage pasteboard splints over the inner surface of the child's elbows so that it cannot bend the arms.

Similar to this habit are the habits of sucking a rubber nipple known as a pacifier, biting or sucking on blankets or articles of clothing or toys.

Biting of the finger nails is frequently seen in older children, and is a more difficult habit to break, as it is usually dependent upon some nervous or digestive derangement. Weak, underfed children often bite their nails, and it is frequently an early symptom of St. Vitus' dance (chorea). The child's health must be built up, and the nervous disease, if there is any, must receive proper attention.

* "Hand-i-hold" babe mits for sale by R. M. Clark & Company, 246 Summer Street, Boston.

It is not wise to punish children for these habits, but they should be corrected by the exercise of tact and patience.

Bed Wetting: It is abnormal for a child to wet the bed at night after the age of two and a half or three years. In rare cases this may be due to indifference on the part of the child, and in such cases mild means of punishment may be effective. In a large majority of cases, however, bed wetting is due to some physical cause and the child is not to be blamed for it. Such children should receive careful physical examination, and if this symptom is due to reflex irritation, the affected parts should be treated. In addition to this, it is best not to give the child any liquids to drink after 4 P. M. The supper should be dry and the child should be taken up about 9 or 10 o'clock in the evening. The foot of the bed may be elevated a few inches by the use of blocks or bricks. Temporary attacks of bed wetting are often caused by an irritation of the bladder due to some abnormal condition of the urine. In such cases the urine should be examined. Carefully selected homœopathic remedies usually give relief.

Thigh Rubbing: This condition, which is sometimes referred to as masturbation, is one of the most difficult to prevent. It occurs most frequently in girl babies, and if allowed to go on may result in serious harm. It is often due to some irritation of the external genitals, and great care must be used to prevent irritation of the parts from the urine or from chafing. In other cases, it is necessary to circumcise the infant or take other measures for removing the reflex irritation, which causes the habit. In older children moral suasion or even mild punishment may be necessary, and in extreme cases mechanical devices for separating the thighs are useful.

The condition is a most important one and in a large majority of cases mothers will need the help of the family physician in curing the habit.

ACCIDENTS.

Foreign Bodies: Foreign bodies sometimes become lodged in the nose. In such cases it is sometimes possible to dislodge them by closing one nostril and having the child make

an effort to blow the foreign body out. If this cannot be done and the object is not within easy reach, no attempt should be made to remove it by unskilled hands. Serious harm may be done to the sensitive mucous membrane, and even with proper instruments it is not always easy to remove a foreign body without doing harm.

Ear: When such bodies become lodged in the ear, or, as sometimes happens, insects fly into the ear, an attempt may be made to remove them by allowing a few drops of warm sweet oil to pass into the ear. It is not wise to put water into the ear, as such articles as peas, beans, etc., swell when wet and cause great pain and difficulty in removing them.

Eye: Particles of dust in the eye may be removed if careful search is made for them in a light. They are most likely to lodge under the upper lid, and it is necessary to evert the lid in order to find them. This is done by taking the lashes of the upper lid between the thumb and finger, and, with some firm object like a pencil, pressure is made downwards about the middle part of the upper lid. If pressure is made in the right direction, the lid

will turn easily, the particle may be seen and wiped off with a soft cloth. Where the eye has become inflamed from a foreign body, cold compresses should be applied and changed frequently.

Stomach: If the child has swallowed a foreign body, it is well to pass the finger immediately into the throat and see if the object can be felt, and if possible remove it. The child may be held with the head hanging down and in this position, the coughing of the child will frequently loosen the object so that it can be reached. Objects that pass into the stomach need cause very little apprehension. They rarely do harm. Large quantities of bread or other starchy foods should be taken and as little water as possible. Cathartics should never be given. The stools should be searched carefully for the swallowed object.

Wounds and Contusions: Cuts and lacerations in which the skin is broken, if not extensive, may be cared for at home. The wound should be thoroughly cleansed by holding it under running hot water, or immersing the hand or injured part in a basin of water as hot as can be borne. It is wise to

have small packages of sterile gauze and sterile bandages in the house for such emergencies. These can be procured at any drug store and the wrappings should not be removed until the dressing is used. The best local application for such wounds is homœopathic tincture of Calendula (one part Calendula to four parts of water). A small piece of gauze is dipped into this solution and placed over the wound, covered with cotton and bandaged.

Where there is arterial bleeding, which may be recognized by the fact that the blood comes in spurts, a handkerchief should be twisted into a cord and tied tightly about the part between the wound and the heart. If sufficient pressure cannot be made in this way, a tourniquet may be improvised by passing a stick through the handkerchief and twisting it. Bleeding from the veins is not usually dangerous. It is oozing in character rather than spurting. Elevating the injured part and a tight bandage will usually control venous bleeding.

Simple contusions where the skin is not broken should be treated immediately with

cold water. If the part is held under the cold water faucet or in a basin of cold water for half an hour immediately after the injury is received it will greatly lessen the subsequent pain. The best treatment for such wounds is the local application of compresses of Arnica tincture (one part Arnica to four parts of warm water). Cotton placed over the compress will prevent it from evaporating.

Burns and Scalds: Burns in which there is a large area of the skin involved are serious and must receive immediate internal and external treatment. Mild burns are best treated by covering immediately with compresses soaked in a saturated solution of Bicarbonate of Soda (baking soda). If blisters have formed they should first be pricked with a needle which has been held in the flame, but on no account should the white skin covering the surface of the blisters be removed. For a later dressing after the intense pain has subsided, Boric acid vaseline (10 per cent.) should be used. This should be smeared on a small piece of sterile gauze and laid over the burn, covered with cotton and bandaged.

Burns should be dressed immediately. Even

if the desired materials are not at hand, the burn should be covered with a clean piece of gauze or linen and wrapped up so as to exclude the air, until a suitable dressing can be applied.

Fractures: Fractures should receive the attention of a physician as early as possible. If there is any doubt about the nature of the injury, and it is desirable to investigate, the clothing should be removed from the injured part by ripping. No attempt should be made to remove the clothing in the ordinary way. If it is necessary to move a child with a fractured limb, a temporary dressing may be made from a pillow. The arm or leg is placed lengthwise on a pillow and straps or strings passed around the pillow and limb so that the part rests comfortably. In moving, the pillow and limb must be carefully supported and jolting and jarring avoided.

Injuries to the head are most dangerous and sometimes cause serious injury to the brain, even when the scalp is not broken.

Poisoning: If the child has taken a poisonous substance it is necessary to cause vomiting as soon as possible. This may sometimes

be accomplished by tickling the child's throat with the finger or by having the child take two or three glasses of luke warm water, to which has been added either a little mustard or oil of some sort (sweet oil, lard or vaseline). If none of these is at hand, common salt may be added to the water.

The best general antidote to be given before a physician arrives is milk. As much as possible should be taken. The white of egg in water is also a serviceable antidote for many poisons. It may be given in addition to the milk and should be used in about the proportion of the white of four eggs to a quart of water. Usually these methods of treatment are sufficient until a physician arrives, and the stomach is washed out by means of a stomach tube and the proper antidotes given.

INDEX.

- Abdominal band, 22
bandage in whooping
cough, 148
Absorbent cotton, 73
Accidents, 168
Acute indigestion, 119
Adenoids, signs of, 102
as a cause of croup, 158
Age for weaning, 63
Air in nursery, 11, 15
Airings, 32
Anger, cry of, 31
Anointing the new-born, 17
Antidotes, 174
Applications, external, 108
hot, 109
cold, 109
Arterial bleeding, 171
Arrowroot gruel, 95
Artificial feeding, general
directions for, 85

Baby carriage, 34
Bad habits, 165
Band, abdominal, 22
as a cause of colic, 22
Barley jelly, 94

Barley water, 77
Basin, wash, 19
Basis of milk formulas, 74
Bathing, 17
Bathing, method of, 18
Bath thermometer, 17
Bath-tub, 19
Baths, cleansing, 112
in convulsions, 164
in illness, 111
foot, 111
temperature, 111
Bed, nursery, 13
wetting, 167
room, nursery maid's, 37
Beef juice, 92
Binders, flannel, 22
Biting the nails, 166
Blanc mange, Irish moss, 96
Blankets, 14
wrapping, 28
Blanket pins, 14
Bleeding, 171
Board of Health rules, 129
Boiler, sterilizing, 73
Bones, fractures of, 173
in rickets, 161

- Bones in scurvy, 162
- Bonnet, 28
- Bottles, milk, 68
 - nursing, 72
- Bow-legs, 161
- Bran bag in bathing, 21
- Bread, double-baked, 95
- Breast, milk, too rapid flow
 - of, 60
 - nursing, 55
 - pigeon, 161
- Breasts, care of, 56
- Breathing, abnormal, 101
 - labored, 101
 - mouth, 102
 - rapid, 102
 - shallow, 101
- Bronchitis, 155
- Broncho-pneumonia, 155
- Broths, 93
- Brown flour gruel, 95
- Burns, 172
- Buttons on garments, 26
- Care of breasts, 56
 - eyes, 39
 - infants, 11
 - nipples, 56
 - nursing bottles, 72
 - rubber nipple, 72
- Carriage, baby, 34
- Cathartics for children, 108
 - during nursing period, 59
- Cereo, 77
- Certified dairies, 68
 - milk, 67
- Chapin dipper, 69
- Chicken-pox, 144
- Children, examination of, 106
- Chocolate, 92
- Circumcism, 168
- Closets in nursery, 14
- Clothing, 21
 - long, 25
 - short, 26
- Clothes, wash, 20
- Cocoa, 90
- Coffee, 90
 - crust, 94
- Cold applications, 109
- Colds, 150
 - causes of, 150
 - prevention of, 150
 - treatment of, 152
- Colostrom, 55
- Communicable diseases, 130
- Composition of milk, 65
- Compresses, 110
- Condensed milk, 83
- Constipation in artificially
 - fed infants, 88
 - breast fed infants, 88
 - older children, 124
- Constituents of milk, 94
- Contagious diseases, 127
 - Board of Health rules, 129
 - disinfection in, 128

- Contagious diseases, isolation in, 127
nursing in, 128
Consumption, 158
Contusions, 170
Convulsions, 164
Cord dressing, 22
Cotton, absorbent, 73
Cow's milk, constituents of, 65
Cough, 104
 during teething, 117
 in measles, 139
 whooping, 145
Croup, false, 131, 157
 membranous, 131
Croup, spasmodic, 157
Crying, 29
Cry of anger, 31
 of fright, 31
 of hunger, 30
 of illness, 31
 normal, 29
 of pain, 30
Curtains in nursery, 12
Cuts, 170
- Dairies, certified, 68
Dentition, normal, 42
 delayed, 43
 difficult, 115
 examination during, 43
 intestinal troubles during, 44
 weaning during, 63
- Dentition, weight during, 46
Development, 49
Dextrinized gruels, 77
Diaper, 23
Diastase, 77
Diarrhoea, 121
Diet during illness, 107
 for insufficient milk, 58
 for nursing mothers, 57
 from twelfth to eighteenth month, 89
 from eighteenth month to fourth year, 89
 in colds, 153
 in diarrhoea, 122
 in rickets, 162
 in scurvy, 163
 in tuberculosis, 160
Diluents, milk, 77
Dipper, Chapin milk, 69
Diphtheria, 130
 laryngeal, 131
 nursing in, 132
Discharge from eyes, 40
Diseases, acute, general signs of, 99
 chronic, general signs of, 103
 contagious, 127
 general, 150
 of alimentary canal, 112
 of nursing mothers, 55
Dishes for preparation of formula, 73

- Disinfection in contagious diseases, 128
 Doors of nursery, 12
 Draperies in nursery, 12
 Drawers in nursery, 14
 Dress, outer, 25, 27
 Dressing, umbilical cord, 22
 Drugs forbidden nursing mothers, 59
 Dust in nursery, 16

 Ear, foreign bodies, in, 169
 Earache, 41, 118
 during dentition, 118
 Ears, care of, 40
 Eggs, boiled, 93
 Enemas, 108
 olive oil, 109
 Enteritis, 121
 Eruption in chicken-pox, 144
 in measles, 138
 in scarlet fever, 134
 Examination of children, 106
 during dentition, 43
 Exercise for nursing mothers, 58
 External applications, 108
 Eyes, care of, 39
 discharge from, 40
 foreign bodies in, 169

 Face, color of, 103
 Fastenings on garments, 26
 Fat free milk, 70-76

 Fat in milk, 65
 Feeding, 53
 amount of each, 74
 maternal, 53
 substitute, 64
 twelfth to eighteenth month, 89
 eighteenth month to fourth year, 89
 Feedings, frequency of, 74
 number of, in twenty-four hours, 74
 Fever, 100
 Fireplace in nursery, 15
 Flannel binder, 22
 petticoat, 25
 Floor of nursery, 12
 Fontanel, 49
 Food during illness, 107
 elements in milk, 65
 forbidden to children, 91
 mastication of, 91
 Foods, proprietary, 83
 Foreign bodies in the ear, 169
 in the eye, 169
 in the nose, 168
 swallowed, 170
 Formula, changing the, 85
 percentage of, 74
 preparation of, 70
 utensils for preparation of, 73
 Formulas, milk, 74
 Frequency of nursing, 55

- Frequency of feedings, 74
Fright, cry of, 31
Furniture in nursery, 12
- Gargles, 108
Garment fastenings, 26
Garments, out of doors, 33
Gastritis, 119
General directions for artificial feeding, 85
General diseases, 150
German measles, 141
Go-carts, 34
Growing pains, 163
Gruel, arrowroot, 95
 Indian meal, 95
 brown flour, 95
Gruels, dextrinized, 77
Gums, congestion of, 163
- Habits, bad, 165
Head covering, 27
 injuries to, 173
Hearing, sense of, 49
Heating the nursery, 15
Hood, 28
Homœopathic remedies, 104
Hot applications, 109
 weather, weaning in, 62
Hunger, cry of, 30
Hygeia bottle, 72
 nipple, 72
Illness, cry of, 31
- Impressions, mental, 49
Indian meal gruel, 95
Indigestion, acute, 119
 feeding in, 119
Infant foods, 83
Infant, the nursing, 59
 indigestion in the, 60
 vomiting of, 60
 poorly nourished, 59
 well nourished, 59
Inflammation of eyes, 40
Inhalations in whooping
 cough, 147
Injections, rectal, 148
Injuries, 170
Intestinal parasites, 126
 troubles during dentition,
 44
Irregularity in nursing, 61
Irritability, 103
Isolation in contagious diseases, 127
- Junket, 94
- Kissing, 38
Koplik's spots, 137
Knock-knees, 161
- Lacerations, 170
Light in nursery, 11
Lime water, 78
Lobar pneumonia, 155
Location of nursery, 12

- Long clothing, 25
Loss of weight, 46
- Maids, nursery, 36
Mastitis, 143
Masturbation, 168
Maternal feeding, 53
 contra-indications for, 54
 importance of, 53
Measles, 137
 German, 141
Measuring glass for milk, 72
Membranous croup, 131
Menstruation in nursing
 mothers, 55
Mental impressions, 49
Method of weaning, 61
Milk as an antidote, 174
 bottles, 68
 certified, 67
 condensed, 83
 diluent, 77
 dipper, 69
 fat free, 70, 76
 fat in, 65
 food elements in, 65
 formulas, 74
 basis of, 74
 constituents of, 74
 for first month, 74
 for first to fifth month, 75
 for fifth to ninth month,
 76
- Milk formulas for ninth to
 twelfth month, 76
 modified, 65
 mothers', 53
 pasteurized, 79
 peptonized, 82
 proteids in, 65
 selection of, 67
 sterilized, 80
 sugar in, 65
 supply, 81
 of nursing mothers, 54
 temperature of, 86
 top, 66, 69, 74
Modified milk, preparation
 of, 68
Mothers' milk, constituents
 of, 65
Mouth breathing, 102
 care of, 37
 washes, 108
Mumps, 142
- Nails, biting of, 166
Napkins, 23
 cleansing of, 24
Navel dressing, 22
Nervousness, 103
Night feeding, 86
 garments, 27
Nipple, rubber, 72
 opening in, 86
Nipples, care of, 56
 shield for, 57

- Nipples, sore, 56
Nose, cleansing of, 41
 foreign bodies in, 168
 sprays, 42
Nurse, wet, 64
Nursery, the, 11
 maid, the, 36
 bedroom of, 37
 training of, 37
Nursing bottle, 72
 breast, 55
 at night, 55
 frequency of, 55
 irregularity of, 61
 period of, 56
 during illness, 107
 in contagious diseases, 128
 in diphtheria, 132
 in measles, 139
 in scarlet fever, 136
 infant, the, 59
 the poorly nourished, 59
 the well nourished, 59
 indigestion of the, 60
 vomiting of the, 60
Nursing mother, articles of
 diet allowed the, 57
 articles of diet forbidden
 the, 58
 cathartics for the, 59
 diet of the, 57
 diet for insufficient milk
 in the, 58
 diseases of the, 55
Nursing mother, drugs for-
 bidden the, 59
 exercise of the, 58
 menstruation in the, 55
 milk supply of the, 54
 pregnancy in the, 55
 regimen of the, 57
Number of feedings in
 twenty-four hours, 74
Oatmeal water, 77
Orange juice in scurvy, 163
Orchitis, 143
Outer garments, 33
Overfeeding, signs of, 86
Pacifier, 38, 166
Pain, 102
 cry of, 30
 location of, 102
Pains, growing, 163
Panada, 93
Parasites, intestinal, 126
Parotitis, 142
Pasteurized milk, 79
Peptonized milk, 82
Peptogenic milk powder, 83
Peptonizing powders, 82
Percentage composition of
 milk, 65
 composition of milk for-
 mulas, 74
Period of nursing, 56
Pertussis, 145
Petticoat, flannel, 25, 27

- Phthisis, 158
 Pictures in nursery, 13
 Pigeon breast, 161
 Pillows, 14
 Pins in clothing, 23
 Poisoning, 173
 Powder after bath, 20
 Pneumonia, 155
 pain in, 157
 Pregnancy in nursing
 mothers, 55
 Preparation of barley water,
 77
 of modified milk, 68
 of oatmeal water, 77
 of rice water, 77
 of whey, 78
 Proteids in milk, 65

 Quinsy, 113

 Rachitis, 161
 Rapid weaning, 62
 Recipes, 92
 Regimen of nursing mother,
 57
 Regularity of nursing, 56
 Remedies, homœopathic, 104
 administration of, 105
 effects of, 106
 Respiration, 101
 Rheumatism, 163
 heart in, 164
 Rice water, 77

 Rickets, 161
 diet in, 162
 Rings, teething, 44
 Rotheln, 141
 Rubber nipple, 72
 Rubbing the thighs, 168
 Rubella, 141
 Rubeola, 137

 Salt, 78
 Scalds, 172
 Scales, nursery, 16
 Scarlatina, 134
 Scarlet fever, 134
 after-effects of, 136
 nursing in, 136
 Scorbutus, 162
 Scurvy, 161
 Selection of milk, 67
 Shirt, 25, 27
 Short clothing, 26
 Shoes, 27
 Sitting, 50
 Skin in illness, 103
 dry, 103
 hot, 103
 normal color of, 103
 Skull, injuries to, 173
 openings in, 49
 Sleep, 35, 102
 after nursing, 35, 87
 during nursing, 87
 Sleeping out doors, 35
 Smell, sense of, 49

- Soap, 19
Socks, 25
Sore mouth, 112
Sore nipples, 56
Sore throat, 113
Spasmodic croup, 157
Sprays, nasal, 42
Sprue, 112
Standing, 50
Sterilized milk, 80
Sterilizer, 73
Stockings, 25, 27
Stomach, foreign bodies in, 170
Stomatitis, 112
Stools, character of, 87
Substitute feeding, 64
Sugar in milk, 65
Sugar of milk, 74
Summer complaint, 121
Sweeping the nursery, 16
Sweets, 92

Tables of weight, 47
Talking, beginning of, 50
Taste, sense of, 49
Tea, 90
Teeth, first, 42
 growth of, 43
 second, 43
Teething, 42
 cough during, 117
 rings, 44
 symptoms of, 116

Teething, weaning during, 63
Temperament of nursing mother, 54
Temperature, 100
 changes of, 16
 of bath, 18
 normal, 100
 of nursery, 15
 variations of, 101
Thermometer, bath, 17
 clinical use of, 100
Thigh rubbing, 168
Throat, examination of, 39
Thumb sucking, 165
Tonsils, enlarged, 115
Tonsillitis, 113
Top milk, 66, 69, 74
Toys, 15
Training of nursery maid, 37
Travelling, feeding while, 84
Tub, bath, 19
Tuberculosis, 158
 diet in, 159

Under-feeding, signs of, 85
Utensils for preparation of formula, 73

Variations in weight, 48
Varicella, 144
Venous bleeding, 171
Ventilation of nursery, 15
Voice, 50

- Vomiting, 99
 - of nursing infants, 60
- Walls of nursery, 13
- Wallpaper, 13
- Wash basin, 19
 - cloths, 20
- Weaning, 61
 - during teething, 63
 - in hot weather, 62
 - rapid, 62
- Weather, changes in, 16
- Weight, 45
 - during dentition, 46
- Weight, loss of, 46, 104
 - tables of, 47
 - variations of, 48
- Wet nurse, 64
- Wetting the bed, 167
- Whey, 78
- Whooping cough, 145
 - abdominal bandage for, 148
 - diet in, 148
 - inhalations in, 147
- Windows in nursery, 11
- Worms, 126
- Wounds, 170
- Wrapping blankets, 28



